

# Flow

MARCH, 1951

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DETROIT



**"CARRIER'S  
FORK TRUCK-DRIVER  
TRAINING PROGRAM"**



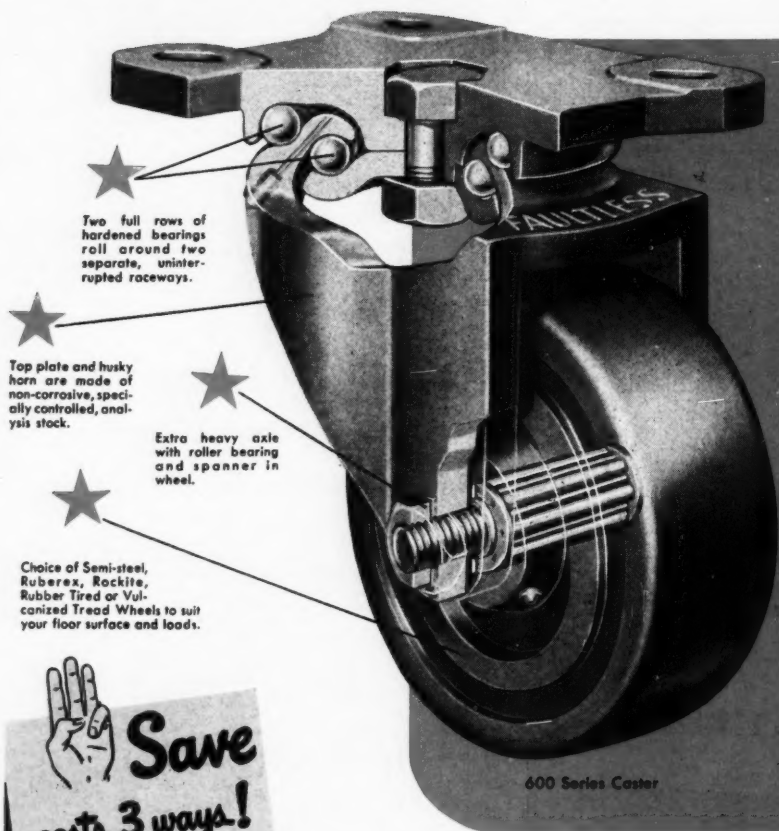
**"COST  
ACCOUNTING FOR  
MATERIAL HANDLING"**

**TIMELY REPORTS  
IN THIS ISSUE**



**"WASHINGTON  
PACKAGING MEN  
SPEAK TO INDUSTRY"**

*handling* **COSTS** *are* **LESS**  
*where dependable casters*  
**SAVE MAN-POWER**



The new speed and flexibility of production lines rolling on Faultless Casters *cut sharply into direct labor costs*. Waste motion of extra man-power is eliminated. These precision built, *engineered* casters are purposely designed to endure heavy loads and shocks of severe service. In addition to saving man-hours in the handling of mobile equipment, due to smoother performance of Faultless Casters, there's a clear profit from the extra mileage they give. There is a Faultless Caster specifically engineered for your load, speed and floor requirements. Simply ask for further particulars, no obligation.

600 Series Caster



**Save costs 3 ways!**

- 1. PRODUCTION:** Higher production costs demand new *short cuts* ... from receiving to shipping platforms. Faultless Casters speed up the flow of materials.
- 2. MAN-HOURS:** Cutting handling time, *accounting for over 20% of industry's man-hours*, provides your greatest opportunity for gains in worker productivity—unit output.
- 3. FLOORS:** No need for costly floor alterations or floor covering—Faultless wheels are available for all types of floor surfaces and loads.

NOELTING

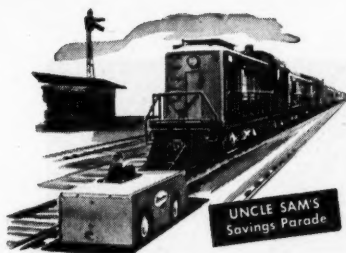
**Faultless**  
**CASTERS**  
**FOR INDUSTRY**

**FAULTLESS CASTER CORPORATION DEPT. F-3, EVANSVILLE 7, IND.**

Branches in Atlanta, Boston, Chicago, Dallas, Detroit, Grand Rapids, High Point, Los Angeles, New York, St. Louis, Canada: Stratford, Ontario

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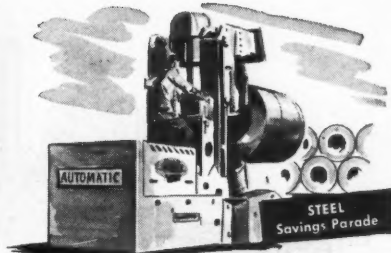




FOR THE NATION'S DEFENSE, Automatic has produced the world's mightiest **ELECTRIC Propelled Tractor**. Small enough to fit into living room, it can pull a load over 3 million pounds, the equivalent of a 125 car freight train. Whether your material is heavy or light, Automatic has an **ELECTRIC TRUCK** to move and stack your product.



HANDLING OF WONDER DRUGS becomes everyday routine with Automatic's Skylift, the **ELECTRIC Truck** you drive like an automobile. In a single 8 hour day, just one Automatic Skylift can lift, move and stack approximately 5000 cases of life-saving penicillin or any other drug product and eliminate hundreds of costly man-hours.



A RIBBON OF STEEL FROM NEW YORK TO ST. LOUIS is a normal day's production of a midwestern strip mill . . . a 300% increase in tonnage, since Automatic developed and produced **ELECTRIC trucks** capable of handling 60,000 pounds. Previously, production was 15,000 pound coils . . . the maximum that could be handled without shutdowns for rethreading.

## Help yourself to these and 1001 more ways to save Handling money

Every day in all industry, these and 1001 other products are handled faster, easier and at as much as 50-75% less cost with Automatic Electric Trucks and Transporters.

These amazing cost-cutting electric trucks lift, move and stack hundreds of pounds or tons and tons of your products with easy finger-tip control. Empty air space in your warehouse can be turned into extra storage space with Automatic Electric Trucks that stack ceiling high.

You'll find these trucks pay for themselves in as little as months . . . save you costly man hours and release men from back-breaking hand handling for more productive work to help you meet today's stepped up demand.

Let us show you how they speed production, get rid of costly bottle-necks, delayed deliveries . . . help you ship more goods faster. Mail coupon for facts on how to save money in your business.



BEFORE AUTOMATIC ELECTRIC TRUCKS were used to handle paper, it took two men eight hours of hand-handling to move and store skid loads of flat paper stock. Now, it's an easy job for just one man and an Automatic **TRANSTACKER**. In one instance savings were \$4320 a year, including 2900 additional square feet of storage space.



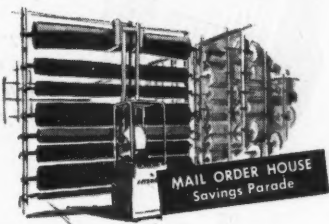
HANDLED WITH CARE . . . enough eggs to feed an average family for 8 years is an easy one load job for Automatic **SKYLIFT**. No matter how fragile your products are, Automatic **ELECTRIC Trucks** will handle them with complete safety . . . bring you added savings by reducing product damage.



UNLOADING HEAVY TINPLATE in bundles weighing 2,800 pounds each from freight cars by hand used to take 9 men 3 hours . . . 27 man-hours. Today with Automatic Transporters, 3 men do the same job in only one hour . . . 24 costly man-hours saved on one job . . . 6 men made available for more productive work.



NEW CARS cost less because this powerful Automatic **ELECTRIC Truck** saves the manufacturer money . . . lowers the cost to you. Even the huge 86,000 pound dies used to manufacture these automobiles are easily lifted and moved, with only a fraction of the power in this mighty **ELECTRIC Truck** that can handle up to 110,000 pounds.



100,000 ITEMS are handled at the rate of 30 carloads a day in just one warehouse. With cost-cutting Automatic **ELECTRIC Trucks** they move, lift and stack, everything from cumbersome carpets and furnaces to clothing and cosmetics with equal speed, ease and economy . . . and make extra storage space available.

### Automatic's Parade of Electric Trucks



"101" Transporter



"101" Transstacker



Automatic Skylift



No One Makes Electric Trucks Like Automatic . . . No Trucks Cost Less to Operate

Circle No. 2 on Reader Service Card for more information

### AUTOMATIC TRANSPORTATION CO.

DIV. OF THE YALE & TOWNE MFG. CO.

141 W. 87th Street, Dept. C-1, Chicago 20, Ill.

Please send FREE Money-Saver CHECK CHART of 8 Important Material Handling Questions, and Booklet: "How to Make Your Material Handling Pay Dividends."

Company .....

By ..... Position .....

Address .....

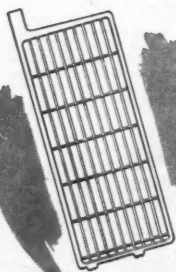
City ..... Zone ..... State .....



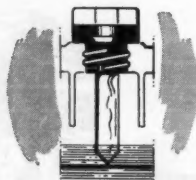
# GOULD-POWERED TRUCKS!

**Keep  
Production  
Rolling!**

Here's why. Battery trucks are always ready to work . . . position loads faster . . . cut accidents . . . are quiet and odorless . . . are safe with foods and inflammables . . . hug the floor on turns and high lifts . . . reduce operator fatigue.



*Gould's "Z" Grid is completely solid all the way through. Porosity reduced 85%! 66% more resistant.*



*Gould batteries with Telelevel Vents save time and trouble—show electrolyte level without removal of Vent Caps.*

*Regenerative active material that renews itself continuously is held in place to do useful work by exclusive glass tape insulation.*



**Power your trucks with  
GOULD "THIRTY" BATTERIES**  
America's Finest Industrial Truck Batteries

## GOULD

STORAGE BATTERIES

GOULD-NATIONAL BATTERIES, INC.  
TRENTON 7, NEW JERSEY

*Always Use Gould National Automobile and Truck Batteries  
Formerly Gould Storage Battery Corporation*

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MARCH, 1951 • FLOW



VOL. 7, NO. 5

MARCH, 1951

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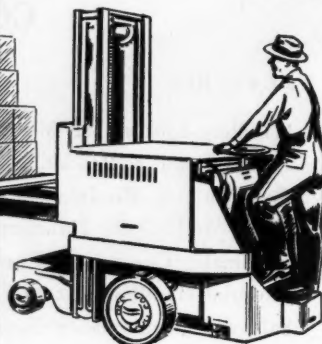
**NBP**

"Acceptance under section 34.64, P. L. and R. authorized at Milwaukee, Wisconsin."





## CHECK POINT FOR MATERIALS HANDLING EFFICIENCY . . . WHERE HORIZONTAL MEETS VERTICAL



Today you're facing tough problems. And the solution to these problems calls for constant checks on every operation to cut out inefficiencies.

When you come to checking your materials handling system, don't overlook the point where your hand and power trucks meet your freight elevators. For unless your freight elevators are a planned part of your overall handling system, supplies and parts can't move smoothly . . . and your handling costs climb fast.

To help you plan your vertical transportation for peak efficiency, Westinghouse offers "The Buyer's Guide for Freight Elevators", B-4402. This is the most complete source of vital information available on the proper selection and application of freight elevators. For your free copy of this book, write Westinghouse Electric Corp., Elevator Division, Dept. M, Jersey City, N. J.

**WESTINGHOUSE FREIGHT ELEVATORS**

YOU CAN BE SURE...IF IT'S

# Westinghouse

J-98606

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MOTOROLA SPANS THE GAPS  
IN THE PRODUCTION LINE

## MOTOROLA FM 2-WAY RADIO



Uni-Channel SENSICON Dispatcher for use as portable base station, mobile dash or trunk mount.



"HANDIE-TALKIE" Radiophone houses a complete FM transmitter-receiver in a single compact unit.

### Handles 76 rush calls a day on a single shift at Caterpillar Tractor Co.

Helping to keep the sprawling production lines rolling at this gigantic 128-acre plant is the job of versatile Motorola FM 2-way radio! With the Motorola engineered inter-plant communication system, Caterpillar is maintaining an unbroken stream of materials flowing to the most remote sections of the plant.



### MOTOROLA CAN SPEED YOUR PRODUCTION, TOO!

It will pay you to investigate how a specially engineered Motorola FM 2-way radio system can save precious time, labor and money in your specific operation. You get *guaranteed peak performance* with Motorola...equipment that will *not* be obsolete tomorrow because it incorporates the "years ahead" engineering developments of Motorola's famed research laboratories. It will pay you to **INSIST ON MOTOROLA**—the world leader in communication systems for industry!

WRITE FOR FREE INFORMATION REQUEST

Fill in coupon and mail to:

**Motorola Inc.**

COMMUNICATIONS & ELECTRONICS DIVISION

4545 Augusta Blvd., Chicago 51, Ill.

Please send me detailed information on Motorola FM 2-way radio equipment for industrial applications.

Name \_\_\_\_\_ Phone \_\_\_\_\_

Company \_\_\_\_\_ Position \_\_\_\_\_

Address \_\_\_\_\_ Zone \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_

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**Constant**  
**"STOPS AND STARTS"**  
**knock out ordinary**  
**gas trucks**

Constant stop-start operation in industrial trucks means costly operation. Clutch, tires, engine, power transmission parts — and even the driver — are too quickly worn out. Replacement costs mount and trucks lose time on the job. There is *one* way to lick this problem—it's Fluid Drive, the famous cushioned power transmission used exclusively in the new YALE Fork Lift Gas Trucks!

**Only YALE has**  
**FLUID DRIVE to**  
**solve Stop-and-Start**  
**problem**

**And only the new YALE**  
**can smooth out your**  
**materials handling**  
**with these other**  
**exclusive features**

**Heavy duty hypoid gearing! 65HP**  
all-weather engine! Shockless steering!  
Automotive hydraulic brakes! Cold  
drawn precision aligned uprights! These  
parts — every vital part, in fact — have  
been selected, tested and *proved* for their  
ability to give you more work for your  
money. Let us show you exactly *how*  
*much more!* Write for all the facts today.

**Capacities up to 10,000 pounds**

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Department 43  
Roosevelt Boulevard & Haldeman Avenue,  
Philadelphia 15, Pa.

I am interested in cutting my materials  
handling costs.

☐ Please have your local representative  
call on me.

☐ Please send me **FREE** detailed literature.

Name

Company

Street

City  State

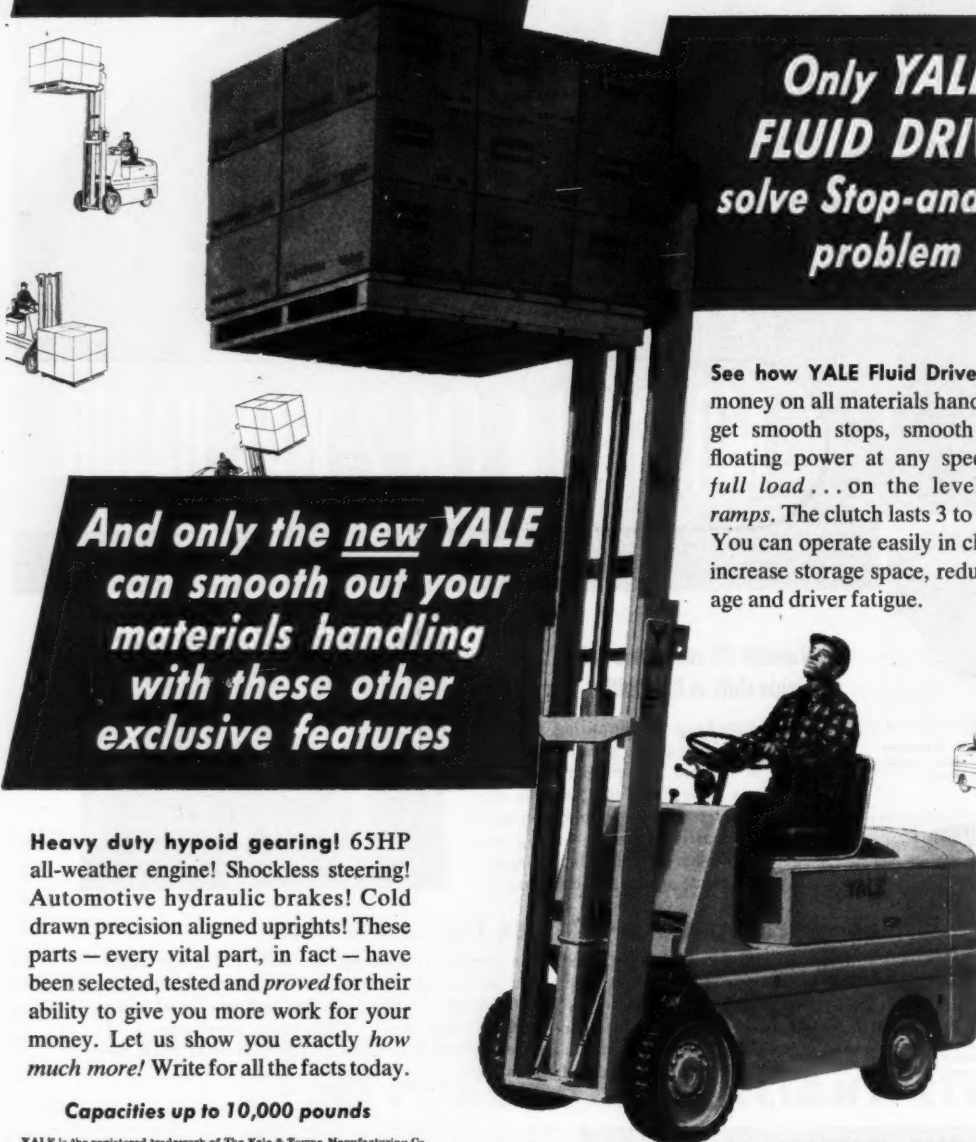
**YALE**

**MATERIALS HANDLING DIVISION**  
**Philadelphia 15, Pa.**

THE YALE & TOWNE MANUFACTURING COMPANY

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**MARCH, 1951 • FLOW**





## Handling Idea of the Month



Circle No. 103 on Reader Card for info. on this equipment.

Hauling out ashes is a job a lot of plants have. Some plants make a real back-breaker out of it with shoveling crews and men tussling with wheelbarrows.

Bethlehem Steel Company, at its Johnstown mills, moves a mountain of slag every day; it has to do the job fast and cheap. And company engineers found old shovel-and-wheelbarrow methods that had looked cheapest when they first started thinking about the removal work were actually costing plenty. So they worked out a tote box-and-truck system that gets the work done in a hurry, at a whopping savings in time and money.

Steel boxes that hold the mill's slag are really part of the truck that carries the slag away. The boxes are taken by fork truck from the furnaces to the highway truck. Hoisted onto the truck's body, they ride to the dump as part of the truck. No muss, no fuss—and no one touching the slag from furnace to dump area.

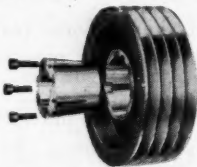
A system like this doesn't have to stop with slag, of course. You can use it for any other waste or scrap that has to be handled.



VISION

G COMPANY

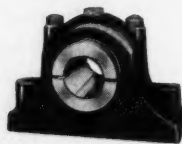
# IF IT'S DODGE -IT'S DEPENDABLE!



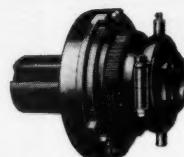
**TAPER-LOCK SHEAVES:** A Dodge "first." Patented. (Taper-Lock is the world's simplest mechanism for mounting wheels to shafts.) 476 stock sizes in A, B, C and D grooves.



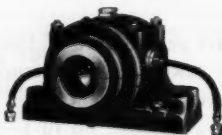
**TORQUE-ARM SPEED REDUCERS:** America's most complete line of shaft mounted speed reducers. Capacities from 1 to 27 h.p. Output speeds from 12 to 330 r.p.m.



**DODGE-TIMKEN BEARINGS:** Another Dodge "first." Mounted units, proved in millions of industry's toughest jobs. Four types to choose from. Shaft sizes from 1-3/16" to 8".



**ROLLING GRIP FRICTION CLUTCHES:** Another Dodge "first." No toggles. Flexible, smooth. Bolted plate and gear tooth plate. 1.3 to 21.2 h.p. at 100 r.p.m.



**SLEEVOIL BEARINGS:** Another Dodge "first." Precision-built, quiet, dependable — "tops" for fan and blower service. Sizes 1-7/16" to 8" in both plain and water cooled types.



**SOLID STEEL CONVEYOR PULLEYS:** Maximum strength, minimum weight. Modern pulleys with interchangeable hubs that cut installation cost. Diameters 6" to 8". All face widths.



**DODGE V-BELTS:** Concave sidewall design. High-strength cord section. Factory measured to insure matched drives with Dodge precision-built sheaves — for dependable performance.



**DODGE TAKE-UPS:** Modern, rugged, dependable. Roller bearing (illustrated), ball bearing and babbitted. Shaft sizes from 3/4" to 4". Travel from 4" to 36".

Circle No. 7 on Reader Service Card for more information

MARCH, 1951 • FLOW

**SPECIALISTS IN POWER TRANSMISSION MACHINERY FOR 73 YEARS**

**NOTED THROUGHOUT THE WORLD  
FOR HIGH QUALITY,  
PRECISION MANUFACTURE**

**MANUFACTURERS OF A BROAD LINE  
OF MECHANICAL POWER  
TRANSMISSION MACHINERY**

**ORIGINATORS OF NEW AND  
BETTER PRODUCTS FOR THE  
MECHANICAL TRANSMISSION OF POWER**

**USED CONFIDENTLY WHERE  
THE GOING IS TOUGHEST**

**DODGE MANUFACTURING CORPORATION, 2300 Union St., Mishawaka, Ind.**

**CALL THE TRANSMISSIONEER:** Most Dodge products are normally available from distributors' stocks — in your territory — when you need them. For information on the newest and best methods of mechanical power transmission, call the Dodge Transmissioneer, graduate of the Dodge factory course. He is your local Dodge Distributor. Look for his name under "Power Transmission Equipment" in your local classified telephone directory.



**LOW BLOCKS:** Roller Bearing, Ball Bearing, Babbitted. **FLANGE BEARINGS:** Roller, Ball, Babbitted. **HANGER BEARINGS:** Roller, Ball, Babbitted. **TAKE-UP HANGERS:** Roller Bearing, Ball Bearing, Babbitted. **BASE PLATES. FLOOR STANDS. V-BELT SHEAVES:** TAPER-LOCK and Bored-to-Shaft. **BELTS:** Industrial and FHP V-Belts, Flex-Link Belting. **SPEED REDUCERS:** TORQUE-ARM Shaft Mounted and Reducers. **CLUTCHES, FRICTION:** Rolling Grip, Diamond D and other Types. **COUPLINGS:** TAPER-LOCK Flexible, TAPER-LOCK Rigid Flange Types. **SAFETY SET COLLS.** **PULLEYS:** Steel Split Transmission and Solid Steel Conveyor Pulleys. **Shaft Lagging. VISES:** SLIDE-SET, Chainist's... **FOR COMPLETE LINE, PRICES AND SIZES, WRITE FOR BULLETINS AND 224-PAGE CATALOG.**

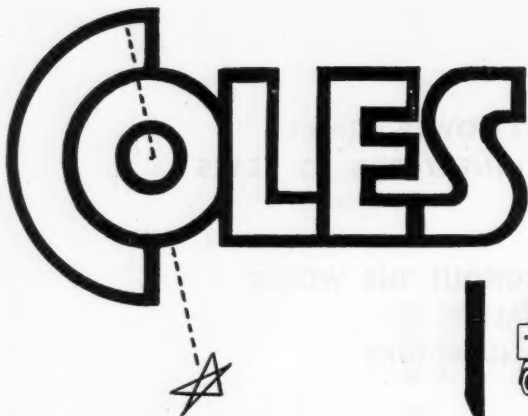
# DODGE

*of Mishawaka, Ind.*

**"First in Power Transmission Machinery!"**

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**THE NAME  
THAT CARRIES WEIGHT  
IN MATERIAL HANDLING!**

**FROM  $1\frac{3}{4}$  TO 23 TON**

● PERFORMING a variety of lifting and conveying operations with precision—there's giant-strength and unrivalled maneuverability in every COLES CRANE. 100% concentration on operation is possible as a result of grouped finger-tip controls.

● When you consider ALL AROUND SAFETY, LOW INITIAL INVESTMENT, LOW OPERATION COST, REDUCED MAINTENANCE COST, MINIMUM YARD SPACE... Plus many other advantages—it is no wonder why COLES Mobile Cranes are the first choice among leaders all over the world.



● Auxiliary attachments such as Grab-hooks, Magnet, and Clam Shovel increase the scope of usefulness of every Coles Crane.



Visit our booth No. 704 at the 4th National Material Handling Exposition, International Amphitheatre, Chicago, April 30-May 4.

**COLES CRANES, INC.**

4307 South Paulina St.  
Chicago 9, Ill.

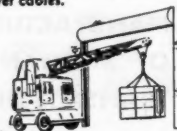


**Symbol of the Finest Material Handling Equipment**

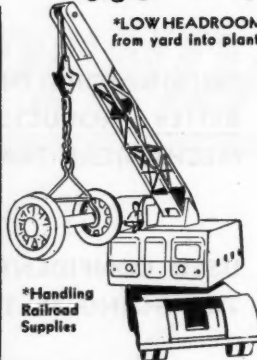
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\*15 ton Coles conveying power cables.



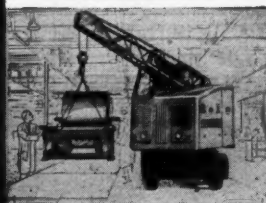
\*LOW HEADROOM from yard into plant.



\*Handling Railroad Supplies



\*Working with magnet close to pile.



\*Inside or outside the plant. Assembly.



## LETTERS to the editors

To FLOW:

Under the auspices of the U. S. and British Governments, and representing the Imperial Chemical Industries of Great Britain, I am spending some time observing American industry . . . I have seen your directory covering material handling. I should very much like to have one of these valuable manuals to take back to England with me if it is possible.—N. Chainley, Palatka, Florida.

*We regret that the 1949-50 FLOW DIRECTORY OF MATERIAL HANDLING EQUIPMENT, MACHINERY AND ACCESSORIES is out of print. The forthcoming 1951-2 edition will be available the latter part of this year.*

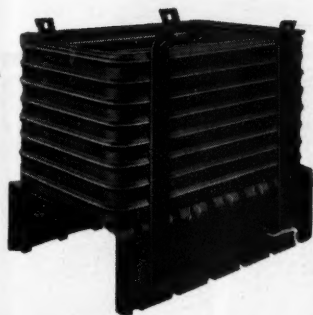
To FLOW:

We have noticed several items in your excellent journal which are of particular interest to Australian engineers . . . we would like to have permission to reprint occasional topical editorial items.—A. W. Payne, The Modern Engineer, Melbourne, Australia.

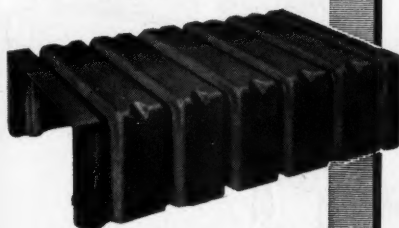
*We are also glad to give our foreign friends our permission to reprint FLOW articles. All we ask is the usual credit line.*

To FLOW:

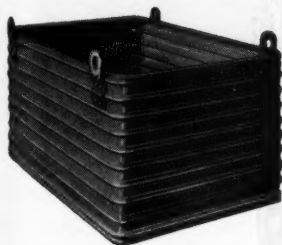
We are making a study of the material handling industry with the idea of estimating the potential market for motors and controls in the industry . . . we are interested primarily in cranes, hoists, con-



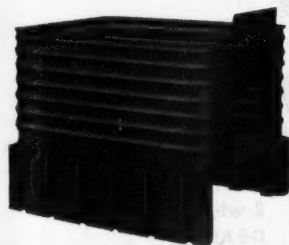
Type PB-120L Truscon Box and Platform with full length lifting lugs.



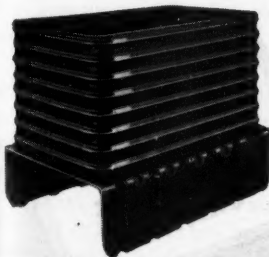
Type P-1. Truscon One Piece Steel Skid Platform.



Type B-80C Truscon Box Equipped for Crane Handling.



Type PB-650 Truscon Box and Platform with sliding End Door.



Type PB-120 Truscon Steel Box and Platform.



*there's a Truscon Answer for it!*

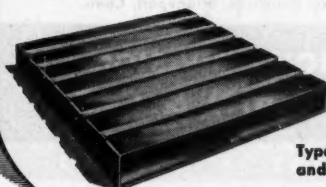
● The jumbled, helter-skelter handling and storage of materials, parts and finished products has no place in today's efficiency plan for profits.

The slow piece-by-piece handling and moving of materials in any step of your manufacturing process, from raw materials to finished product, is costly throughout the day. Because of long experience in the materials handling field, Truscon has a wide range of steel boxes and steel skids that will exactly fit your needs. Write for the Truscon catalog of materials handling equipment, to help you plan a traffic system that will encourage greater output per man hour of labor.

Truscon has field men who have helped solve many materials handling problems, and can be of helpful assistance to you. In the competitive period of industry that lies ahead, you will benefit in many ways from Truscon Steel Boxes and Steel Skids—look to Truscon to help you now.



Truscon Double Face Steel Pallet.

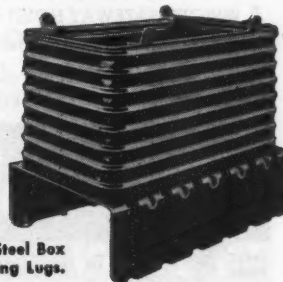


# TRUSCON

## STEEL COMPANY

Pressed Steel Division

6100 TRUSCON AVENUE • CLEVELAND 4, OHIO  
Subsidiary of Republic Steel Corporation



Type PB-120T. Truscon Steel Box and Platform with Tiering Lugs.

Circle No. 9 on Reader Service Card for more information

Now it's the

# WRIGHT ARMY TYPE SAFEWAY

**A steel hand hoist with  
compact, adjustable suspension and trolley  
for Low Overhead**

The ARMY TYPE WRIGHT SAFEWAY HOIST has a trolley adjustable to various width I-beams. Its unique mounting holds hoist close to beam, increasing height of lift. Fine for use where overhead is low. Easily converted to 2-wheel geared trolley unit.

## LONGER-LIFE FEATURES

- Steel in all load-supporting parts
- Load sheaves with five formed pockets
- Automatic load chain lubricator
- Alloy steel load chain
- Swiveling drop-forged load hook
- Alloy steel, machine-cut gears
- Fully enclosed, self-oiling gear case

A WRIGHT SAFEWAY HOIST is a good investment in low-cost lifting equipment. See your Wright distributor today or write for Bulletin DH-269 and prices.

**ACCO**

York, Pa., Chicago, Denver, Detroit, Los Angeles, New York, Philadelphia, Pittsburgh, Portland, San Francisco, Bridgeport, Conn.



**WRIGHT HOIST DIVISION  
AMERICAN CHAIN & CABLE**

*In Business for Your Safety*

Circle No. 10 on Reader Service Card for more information

**2-wheel  
GEARED  
TROLLEY  
ASSEMBLY**

**"Intentionally Better"  
HOISTS  
TROLLEYS  
CRANES**



veyors and industrial trucks. Any estimate of what portion of the total equipment in the various classes is electrical would be very helpful.—G. A. Chase, Westinghouse Electric Corporation.

*We do not have on hand the breakdown you need. Probably the best place to find that information would be the Material Handling Institute.*

#### To FLOW:

Our production department has indicated interest in an article titled "Multiwall Bags Loaded by Fork Truck" which appeared in FLOW. We have a similar loading operation and wish to obtain detailed information on such loading. Can you give us more detailed information on such loading?—H. A. Bell, American Potash & Chemical Corporation.

*Probably your best bet for more information on fork truck loading of multi-wall bags are manufacturers of these containers. Their addresses are enclosed.*

#### To FLOW:

We are interested in a flour conveyor, of the type that will take one hundred pound bags of flour from a freight car to a second story warehouse area.—R. G. Fleetwood, Sec'y-Treasurer, Flowers Baking Company.

*Evidently the type you need is a tray-type elevator conveyor. If the warehouse is located some distance away, a powered belt conveyor with cleats might also be used. In either case, enclosed is a list of manufacturers who should be able to help you out.*



## It Picks a UNIT to do the Job!

Yes... it's really amazing what you can do with a UNIT Crane or Excavator. Take a UNIT 357 Mobile Crane, for example. It travels anywhere! Any time! Powered by ONE engine... controlled and operated by ONE man. Compact, it has light-truck mobility — the smoothest operating and easiest handling crane made. Works efficiently even in small yards where space is limited. FULL VISION CAB gives operator complete visibility in all directions.

UNIT 357 is self-propelled... mounted on six pneumatic tires... duals on the rear... singles on the front. Balanced weight distribution keeps entire undercarriage on ground while working. Dimensions meet all highway requirements. Get the complete UNIT 357 story. Write for bulletin.



### CONVERTIBLE TO ALL ATTACHMENTS



Rapid conversion, from one attachment or boom to another, is one of the many important UNIT 357 features. If the material handling operations in your plant call for magnet, crane, or clamshell, the UNIT 357 is the logical, and economical, answer to your problem. There is no limit to UNIT 357 versatility!

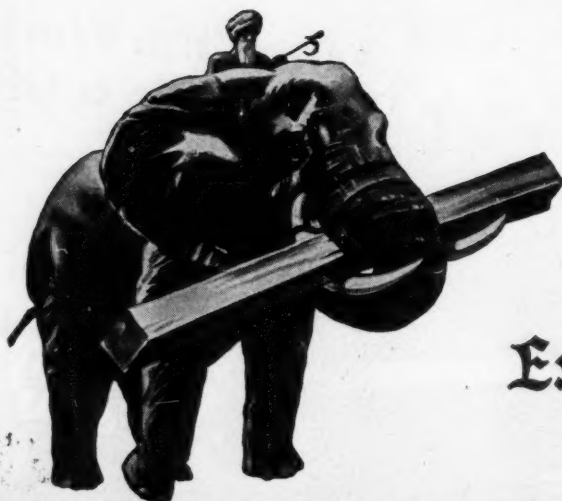
## UNIT CRANE AND SHOVEL CORP.

6531 WEST BURNHAM STREET • MILWAUKEE 14, WISCONSIN, U. S. A.



SHOVELS • DRAGLINES • CLAMSHELLS  
CRANES • TRENCHES • MAGNETS

Circle No. 11 on Reader Service Card for more information



IT COSTS \$5.50 A DAY TO FEED  
AN ELEPHANT... ONLY  
34 CENTS TO "FEED" AN  
**Exide-Ironclad BATTERY**



Thirty-four cents a day pays the full power cost of an Exide-Ironclad battery-powered industrial truck. Lifting, hauling and tiering all day long, it handles more tonnage than a herd of husky tuskers could move in equal time.

But low power cost is only part of the Exide story. In addition, Exide-Ironclad Batteries bring you these important benefits.

**INSTANT SURGE OF POWER**, plus finger-tip control, split-second handling, easy maneuvering, accurate spotting.  
**ROUND-THE-CLOCK PERFORMANCE**—no mechanical troubles, no unscheduled down time.

**UNIFORM SPEED** straight through to end of shift.  
**LOW MAINTENANCE COSTS**—seldom more than 15 cents per shift.

**EXCEPTIONALLY LONG LIFE**—proved on more than 100,000 heavy-duty jobs.

**INHERENT SAFETY**—no vibration to jar goods in transit, less worker fatigue and accident hazards.

There are Exide-Ironclad Batteries for every size and make of battery electric truck.

**POWER BUY**



**AT ANY PRICE**

Write for more facts and **FREE** copy of Exide-Ironclad Topics. It contains latest developments in materials handling . . . shows actual case histories.

**THE ELECTRIC STORAGE BATTERY COMPANY**  
Philadelphia 2

Exide Batteries of Canada, Limited, Toronto

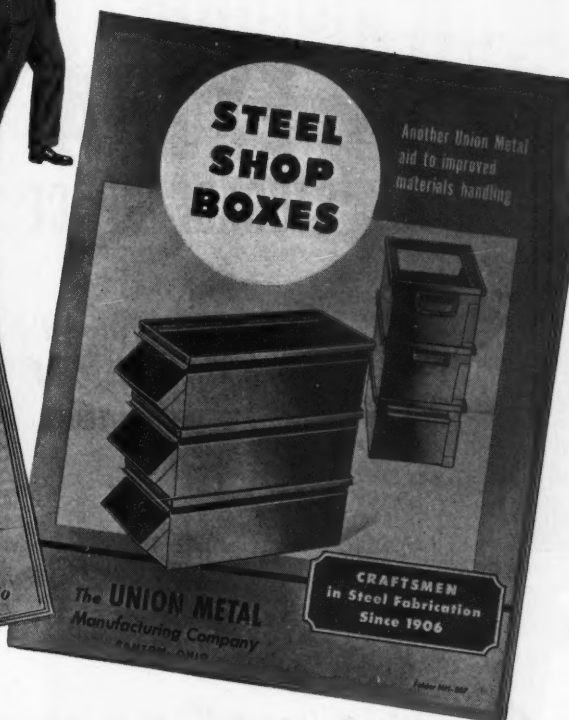
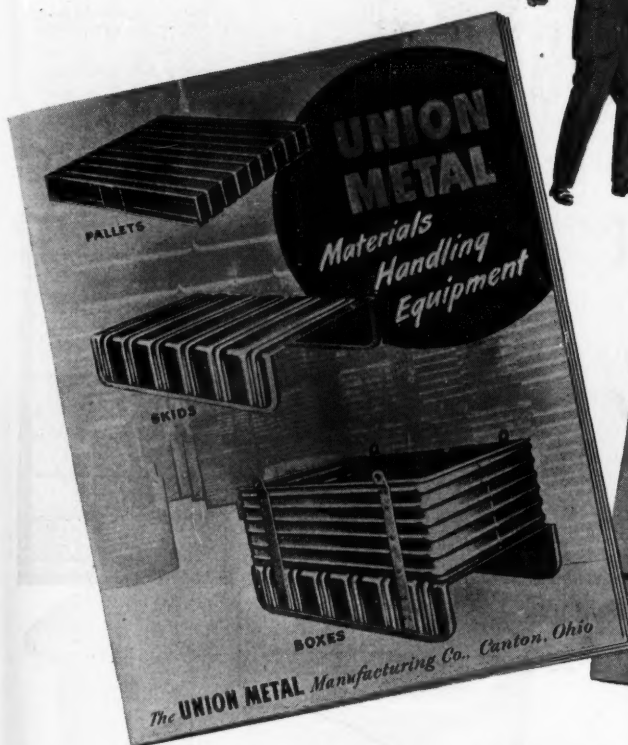
"Exide-Ironclad" Reg. Trade-mark U. S. Pat. Off.

**1888... DEPENDABLE BATTERIES FOR 63 YEARS... 1951**

Circle No. 12 on Reader Service Card for more information

"HERE'S INFORMATION

YOU CAN USE!"



## Send for **UNION METAL** Materials Handling Catalogs

**JUST** sign and mail the coupon below, and you'll receive either or both of these up-to-the-minute catalogs. They're full of information that can help you simplify and save time and money on your materials handling jobs.

Catalog 77 gives you complete information on all the newest Union

Metal developments in pallets, skids and boxes. Fully illustrated, showing the many types and possible combinations.

Catalog MH-807 gives you details about Union Metal steel shop boxes, illustrates typical standard and "special" types. There are many uses for these versatile shop boxes.

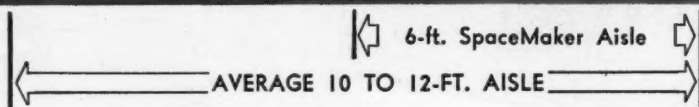
If you move, handle or store materials of practically any size or shape, these Union Metal catalogs can help you with time-and-money-saving ideas. Use the convenient coupon below or write The Union Metal Manufacturing Company, Canton 5, Ohio.

**UNION METAL**  
*Materials Handling Equipment*

The Union Metal Manufacturing Company  
Canton 5, Ohio  
Please send me a free copy of Catalog 77 \_\_\_\_\_;  
Catalog MH-807 \_\_\_\_\_ (Check one or both)  
Name \_\_\_\_\_  
Company \_\_\_\_\_  
Address \_\_\_\_\_  
City \_\_\_\_\_ Zone \_\_\_\_\_ State \_\_\_\_\_

Circle No. 13 on Reader Service Card for more information





## Amazing new SPACEmaker

### CUTS AISLES IN HALF . . . INCREASES STORAGE CAPACITY BY $\frac{1}{3}$ rd

Here's dramatic proof of the savings in space possible **only** with a LYON-Raymond SpaceMaker! This new tiering truck actually right-angle tiers 4-ft. pallet or skid loads 130 inches high from aisles only 6-ft. wide. Here's how the SpaceMaker does it:

**SHORTER LENGTH** Revolutionary SpaceMaker design eliminates counterweight — shortens overall length.

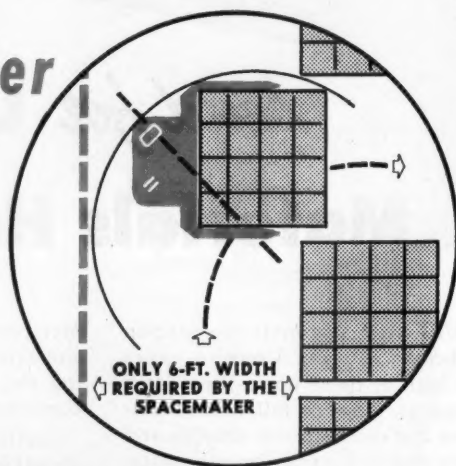
**MAGIC MANEUVERABILITY** Offset drive wheel produces 200° turning arc — enables SpaceMaker to maneuver like magic!

**LIGHTER WEIGHT** Compact size permits use in low-capacity elevators and on lighter-capacity floors.

**Specifications** — SpaceMaker Model E2ST, Straddle Type, Telescopic Tiering Truck, 2000-lb. Capacity. Also available in Non-Telescopic and Skid Platform Models.

## LYON-Raymond Corporation

Skid and Pallet Lifts • Hydraulic Elevating Equipment  
Electric Power Trucks • Positioning • Sheet & Die Handling



*Write today*

for Bulletin 702 on LYON-Raymond's SpaceMaker. Better yet, ask to see it demonstrated at a nearby plant or warehouse — no obligation, naturally!

LYON-Raymond Corporation

3339 Madison St., Greene, N.Y.

Gentlemen: Please send me Bulletin 702 on your new SpaceMaker Electric Tiering Truck.

NAME \_\_\_\_\_ TITLE \_\_\_\_\_

COMPANY \_\_\_\_\_

STREET \_\_\_\_\_

CITY \_\_\_\_\_ STATE \_\_\_\_\_

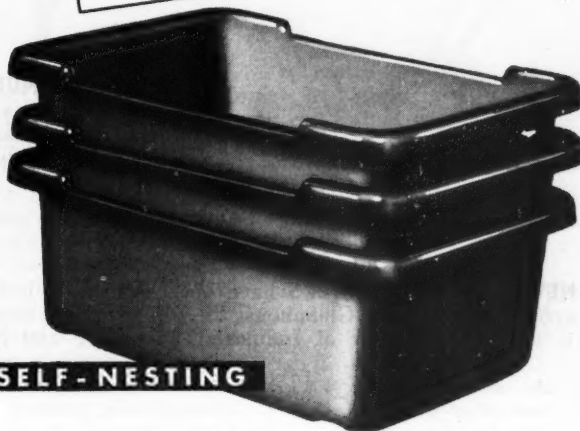
See the SpaceMaker demonstrated—Booths 445 and 504 National Materials Handling Exposition  
Circle No. 14 on Reader Service Card for more information



# Consider your Tote Box problem **NOW!**



**SELF-STACKING**



**SELF-NESTING**

## BOXES IN READY-MADE SIZES

Here are a few of a wide range:

Inside Dimensions:			Weight
Length	Width	Depth	
18.0	12.0	6.0	2.20
18.0	12.0	12.0	4.80
22.0	14.0	12.0	6.00
22.0	16.0	8.0	3.68
24.0	18.0	14.0	8.25
25.0	25.0	14.0	10.20

**E**CONOMY? Durability? U. S. Royalite Tote Boxes have them. Daily use *proves* these amazing time-savers are stronger, lighter and easier to stack, are better than the material they replace. Made of a non-corrosive, non-warping, tough new thermoplastic, these tote boxes are noiseless, odorless, waterproof, mildew-proof and stainproof. Seamless, hand-grips on all four sides, their integral colors last for the lifetime of the box.

## ROYALITE IS

- ★ Lightweight
- ★ Unbreakable, non-splintering
- ★ Non-warping, non-corrosive
- ★ Waterproof, stainproof
- ★ Not affected by oils, alkalies, most acids
- ★ Available in different colors for easy departmental segregation



**UNITED STATES RUBBER COMPANY**

2638 NORTH PULASKI ROAD • CHICAGO 39, ILLINOIS

Circle No. 15 on Reader Service Card for more information

# NEWS VIEWS TRENDS

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**A SAFETY CODE** for industrial power trucks has been published by The American Society of Mechanical Engineers. The code is one of a series of safety codes on material handling worked out by the Society. Starting off with a section on proper truck nomenclature, the booklet goes into safe construction and design features and general safety regulations, winds up with a list of specific safety rules and regulations. If you want a copy, write ASME at 29 West 39th Street, New York City. Price is eighty-five cents.

**MORE ALUMINUM** will be available for civilian and defense needs, as soon as the new aluminum-producing plant being built by Alcoa in Bauxite, Arkansas gets into production. Alcoa figures the new plant will jump the country's aluminum production up by about 50%.

**NEW SIPMHE CHAPTERS** have been formed in Indianapolis and Philadelphia. President of the Indianapolis group is E. E. Clemmons; the Philadelphia chapter will be headed by Herbert M. Lapidus. SIPMHE is short for Society of Industrial Packaging and Materials Handling Engineers.

**PRODUCTION KNOW-HOW** will be the theme of a four-day meet of the ASTE in New York City, starting March 14th. The meeting will be held in form of an open forum, with top-ranking military men and some of the country's top engineers firing away at each other.

**STANDARDIZATION IN WARTIME** is the subject of a new booklet published by American Standards Association. The booklet gives you an idea of what to expect under a wartime setup, tells about the work going on in war standards. For your copy, write ASA at 70 East 45th Street, New York City.

**AIR CARGO SHIPMENTS** since 1945 have brought the revenue ton-miles of air cargo freight up from 20 million ton-miles to 170 ton-miles. In 1950, ton-mile readings took a 25 per cent jump.

**1951's PACKAGING EXPO** will be about 25% larger than last year's, show planners guessed recently. Fifteen per cent more space has already been bought. The show will be held in the Atlantic City Auditorium, April 17-20. So far, there are 235 exhibitors.

# MEN in the news



J. W. Friel  
Standard Pressed Steel



H. T. Hallowell Jr.  
Standard Pressed Steel

... at American Forge & Mfg. Sam B. Heppenstall, Jr., has been elected vice-president-in-charge-of-sales. Heppenstall spent 17 years with Heppenstall Company, resigned in 1945 to accept an appointment with the H. K. Porter Company. More recently, he has been president of Pittsburgh Carbon, Inc., and Artwood Exhibits, Inc.

## ... at Standard Pressed Steel

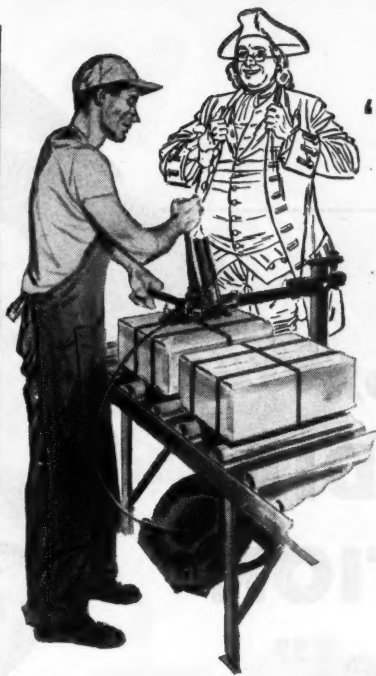
H. Thomas Hallowell, Jr., has been elected President; he succeeds H. T. Hallowell, Sr., who becomes Chairman of the Board. Other changes: J. Whiting Friel is the new Vice President in Charge of Sales; Harold F. Gade has been named Senior Vice President.

## ... at Buda Company

George C. Lichty has been made district manager of the Northwestern territory. Lichty was formerly with the Hyster Company, more recently was Assistant Sales Manager for Gerlinger Carrier Company.

## ... at Acme Steel

Territorial and staff changes to meet expansion of its southern sales has been announced by W. S. Huss, southern division sales manager. W. G. Polley, sales engineer, has been assigned to the



"The eye of the master  
will do more work  
than both his hands."

—Ben Franklin's Almanac, 1757

Touring thy plant with a critical eye can  
do more for the health of thy business  
than a trip to Washington.

—Acme Steel Notebook, 1951

Your management eye needs to be a dozen places at once these days—on supplies, on production, on deliveries, and all over your plant to keep efficiency high and morale up.

Your Acme Steel representative is ready to help bring you greater thrift in the use of Acme Steel's flat steel strapping and stitching wire in your packaging, shipping, and materials handling operations. He may be able to suggest more efficient ways to use Acme Steel products and accessories to improve your use of the available supply.

In spite of an increase in productive capacity, U. S. military requirements for some products make it impossible for Acme Steel to meet all the demands of the 50,000 customers, representing nearly every American industry, in these rearming times. But Acme Steel tries to help in every way we can—we always have for more than 70 years.

Information for ready reference on Acme Steel products is available upon request.

## ACME STEEL COMPANY

Dept. F-31, 2838 Archer Avenue, Chicago 8, Illinois  
To contact the nearest of our 46 Service Offices in the  
United States and Canada, check your telephone  
directory, or write us.



5 things you can do to  
keep your Acme Steel  
Strapping Tools on the job:

1. Clean and oil every week.
2. Check and clean gripping dogs weekly. Replace when teeth are worn.
3. Detect worn punches and jaws early by checking sealed joints regularly. If in doubt, submit samples, identified by model and serial number, to Customer Service Department, Acme Steel Company.
4. Keep parts list and supply of spare parts handy to make minor repairs. Additional parts lists supplied upon request.
5. Ask us about the Acme Steel "3-WAY SERVICE PLAN" for equipment repairs.

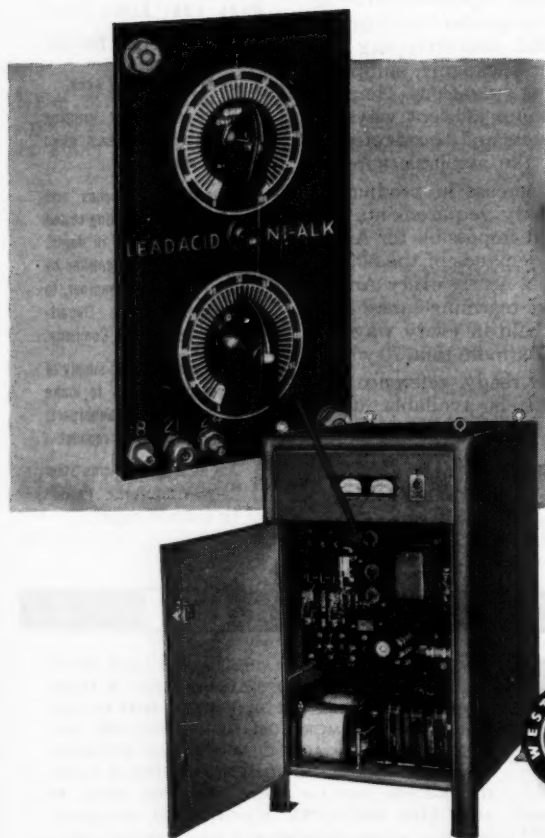


Acme Steel Company has enjoyed sound, steady growth under the American business system of open competition. Since 1901 we have made 286 consecutive dividend payments to our stockholders.

ACME STEELSTRAP flat steel strapping and ACME UNIT-LOAD carload bracing BAND, SEALS and TOOLS • ACME SILVERSTITCHERS and ACME SILVERSTITCH WIRE for box stitching • ACME-MORRISON METAL STITCHERS and BOOK STITCHERS • ACME-CHAMPION BAG STITCHERS • ACME HOT AND COLD ROLLED STRIP STEEL • ACME GALVA-BOND steel slot stock for Venetian blinds • ACME STEEL SPECIALTIES, including hoops, corrugated fasteners, nail-on strapping and other container reinforcements • ACME STEEL ACCESSORIES—snips, cutters, punches, tool mounts, reel stands, coil holders, coil trays.

Circle No. 16 on Reader Service Card for more information

# "Rectox SIMPLE DIAL OPERATION is for me!"



Just set the dials for the starting and finish rate. No transformer or reactor taps to change for current adjustment. It is completely automatic . . . fool-proof. Anyone can operate it. Just plug it in and forget it. What's more:

- ★ One unit serves 80% of your battery charging requirements.
- ★ No energy wasting resistor . . . no moving parts.
- ★ Combination units charge lead-acid or nickel-alkaline-type batteries.

**MORE DATA?** Ask your Westinghouse Representative for a copy of DB-19-040 or write Westinghouse Electric Corporation, P.O. Box 868, Pittsburgh 30, Pennsylvania.

J-21619



Circle No. 17 on Reader Service Card for more information

MARCH, 1951 • FLOW



## Men In The News . . .



J. S. McCullough  
Lamson Corp.



E. J. Heimer  
Yale & Towne

staff of Huss as area special representative; C. A. Carrell is new district manager of the Atlanta sales district; G. R. Easley will be district manager of a new Virginia-North Carolina-South Carolina territory.

### . . . at Yale & Towne

Edwin J. Heimer is the new Sales Manager of Yale & Towne's hand lift and motorized trucks. He succeeds W. Glen Tipton, who retired recently after 23 years with the company. Heimer was formerly a Vice-President of Clapp & Poliak, Inc., national exhibit managers. At one time he was President of Barrett-Cravens Company.

### . . . at Lamson Corp.

James S. McCullough is the new sales promotion manager. He will undertake a program of realigning Lamson's engineering information program on mechanical conveyor, pneumatic tube and compressor systems, with the current need for accelerated industrial production. McCullough had been head of advertising and sales promotion for the Philadelphia Division of The Yale & Towne Mfg. Co. since 1939.

### . . . at Allis Chalmers

Walter Geist, president, died suddenly Monday, January 28, 1951, of heart failure. Geist had been chief executive of the concern since 1942; he joined Allis-Chalmers in 1909 as an errand boy at 10c per hour.



*Materials*  
**HANDLING  
EQUIPMENT**  
CUSTOM BUILT TO MEET  
YOUR NEEDS

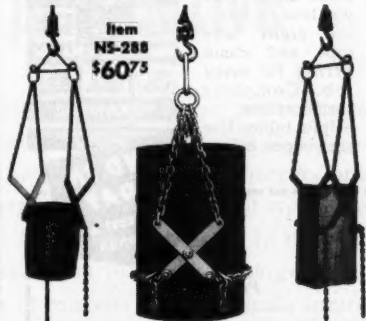
*Designed to do  
Specific Jobs Better*



Item  
B-731  
\$181.50

### DRUM and BARREL TILT

A barrel tilt for controlled, precision dumping or pouring. Ideal for chemicals, solvents, powders, etc. Turns 360° through worm drive. Equipped with two safety type locking devices and all-steel, welded yoke. Hand-operated chain drive.



Item  
NS-288  
\$60.75

### BARREL and BOX GRAB

For picking up any type of wood or steel barrel, box or container, from 40" diameter down to small nail keg size. Will lift up to 2000 lbs.

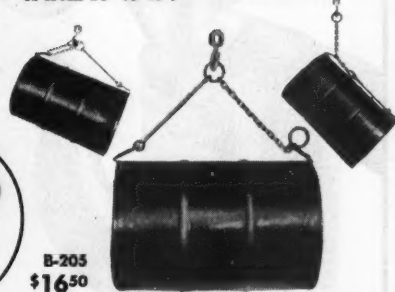


Item J-631  
(1000 lbs)  
\$31.80

Item J-632  
(1 Ton)  
\$39.10

### UNIVERSAL GRAB

For picking up heavy boxes, crates, bales or other loads where hooks may be used. Heavy, forged steel hooks adjustable spread of from 18" to 48".



B-205  
\$16.50

### DRUM and BARREL SLING

Handles barrels, drums, kegs—anything with a lip. Half ton capacity. Heavy welded chain and forged grab hooks. Wt. 8½ lbs.



Item NS-364

Item B-704

3 ton  
\$165

5 ton  
\$247.50

### SHEET STEEL GRAB

Handles sheet steel bundles, any size 0" to 9" thick, 18" to 48" wide and any length.



Item  
C-465  
\$30.25

FOR  
DETROIT

### Vertical DRUM LIFTER

For handling open and closed steel drums in vertical position, by crane or hoist. All-steel, with heavily welded chain. Sure-hold safety barrel grip. Saves plant space. Use for either high or low ceiling condition.

DESIGNED AND MANUFACTURED BY

*Palmer Shile Co.*

16012 Fullerton Avenue, DETROIT 27, MICHIGAN

# SAFETY THAT'S BEYOND PRICE!

Yours for little extra cost with

**LAUGHLIN**  
Safety Hooks



## "The Latch Locks the Load"

Laughlin Safety Hooks, costing little more than ordinary hoist hooks, pay for themselves many times over by preventing accidents. That sturdy safety latch guards against dangerous failure — mechanical or human — in a number of important ways. For example:

1. It prevents load from slipping or jarring loose in mid-air.
2. It eliminates the hazard of carelessness — the load that was supposed to be lashed but wasn't.
3. It prevents overcrowding the hook.
4. It warns of hook failure, because latch will open if hook starts to spread.

## Rig Safety into YOUR Hoists

by changing over to Laughlin Safety Hooks. Made of drop-forged, heat-treated steel, they have pressed steel latches in the smaller sizes, cast bronze latches in the larger sizes, all with stainless steel springs. Available in various types for 750 lb to 15 ton safe working loads at your mine, mill or oil field supply house.

**Free!** Catalog-Data Book tells you how to select the *right* wire rope and chain *fitting* for every job. Complete specifications — helpful tables. Use the coupon below.



**SEND IN TODAY**  
... no cost or obligation

THE THOMAS LAUGHLIN COMPANY  
23 Fore Street, Portland 6, Maine  
Please send Catalog-Data Book #150 to:

Name ..... Position .....  
Company .....  
Street .....  
City ..... Zone ..... State .....

**LAUGHLIN**



THE MOST COMPLETE LINE OF DROP-FORGED WIRE ROPE AND CHAIN FITTINGS



Circle No. 19 on Reader Service Card for more information

## news from the SALES FIELD

Lilly and Lovewell have been named new Pittsburgh representatives for Holly Pneumatic Systems, Inc. Holly manufactures pneumatic conveyors for loose bulk materials, industrial vacuum sweeping systems and dust collecting systems. The Pittsburgh distributor's address is 820 Investment Building.

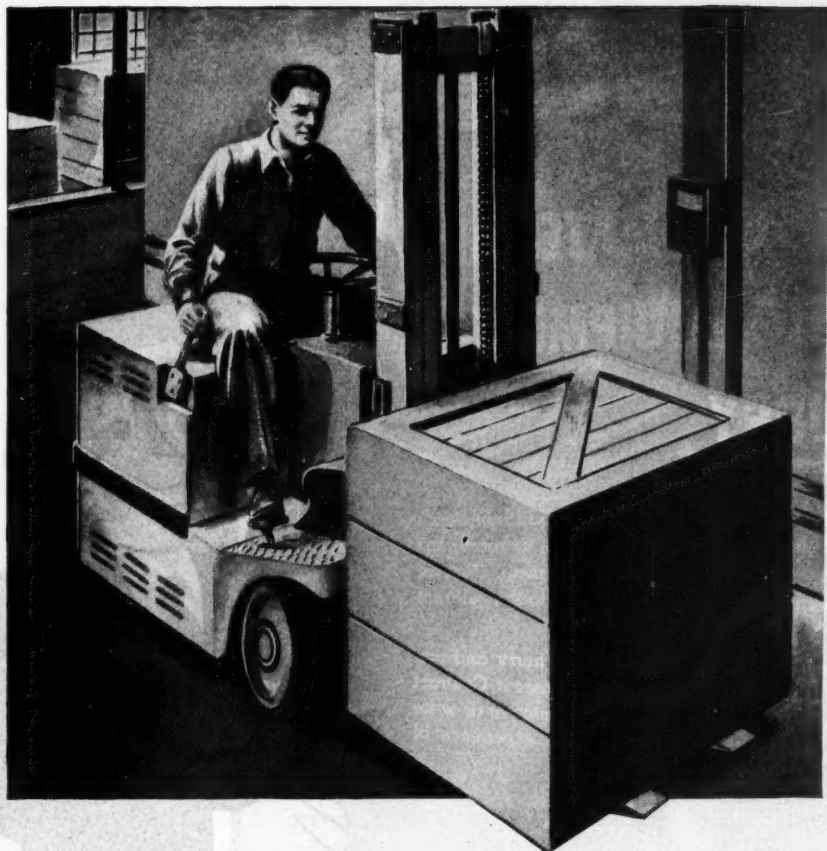
The W. B. McClelland Company has been organized with offices at 16104 Kinsman Road, Cleveland, to sell material handling equipment in northern Ohio. W. B. McClelland heads the new business.

Charles L. Braunwarth has joined the staff of the Ralph W. Payne Company as sales representative, with headquarters in Washington, D. C. Before joining Payne, he was Assistant Sales Manager of Yale & Towne's Industrial Truck Sales Department.

Barret-Cravens Company has announced its merger with the Crescent Truck Company. Crescent will be operated as a division of Barret-Cravens. All sales will be conducted from the general office of Barret-Cravens at 4609 S. Western Blvd., Chicago.

Appointment of Interstate Industrial Equipment Company as sales representative for the Automatic Transportation Company was recently announced. William E. Breece, Sr., is president of Interstate; the firm's address is 2605 Warwick Trafficway, Kansas City, Missouri.

Formation of a new company to manufacture paper pan liners and other packaging products has been announced by two former executives of Sherman Paper Products Corporation. Bestpak, Inc., the new company, will be headed by



Selenium-rectifier truck charger for lead-acid or nickel-alkaline batteries. 45-amp charging rate.



Copper-oxide-rectifier truck charger for lead-acid nickel-alkaline batteries. 90-amp charging rate.

## Make your electric trucks more productive

Plan now to make your investment in electric trucks pay off all the way. Get time-proved General Electric rectifier-type truck chargers to keep trucks on the job . . . keep charging costs low.

G-E battery chargers can be located right in work areas, can easily be moved from place to place. They permit the recharge of batteries right in the truck. Simply plug in the cable—the charger does the rest.

Long-life General Electric selenium and copper-oxide-type chargers require only an occasional dusting for maintenance. There are no moving

parts in the selenium charger, and only a small fan in the copper-oxide types. Both rectifier truck chargers operate from either 115 or 230 volts, 60 cycles, single phase.

In the event that your General Electric battery charger ever requires service, there are 29 strategically located G-E service shops ready to repair, recondition or rebuild them at a moment's notice.

See your truck agent for information on these General Electric battery chargers. Or write Section 463-4 for particulars. *Apparatus Dept., General Electric Company, Schenectady 5, N. Y.*

**GENERAL**  **ELECTRIC**

463-4

Circle No. 20 on Reader Service Card for more information



# HOW TO GET MATERIALS HANDLING EQUIPMENT IN A HURRY

Stepped up plant modernization plus the production necessitated by the defense effort have put an extraordinary drain on modern materials handling equipment. The demand for Powell equipment has far exceeded our steel allotments.

If you need pallets, boxes or platforms in a hurry and can supply the steel or issue a D. O. or Government Contract number, contact your nearest Powell representative or write direct, and the vast facilities and extensive experience of Powell will go to work for you immediately.



See Us At  
**BOOTH 507**  
National Materials  
Handling Exposition

OUR MODERN FACILITIES AND "KNOW HOW"  
ARE UNSURPASSED IN THE INDUSTRY.

**POWELL PRESSED STEEL CO., HUBBARD, OHIO**  
ORIGINATORS OF COLD FORMED ALL STEEL HANDLING EQUIPMENT.  
(In Greater Youngstown)



Circle No. 21 on Reader Service Card for more information

MARCH, 1951 • FLOW



John Herrick as President and Paul Thompson as Vice President and Treasurer. The Bestpak plant is at 470 Atlantic Avenue, Boston.

King and Kringel Machinery Corporation, Denver, has announced the appointment of Mr. J. M. East as vice-president and general manager. King and Kringel is a Hyster Company dealer in the Denver area.

Lewis-Shepard Products, Inc., has opened new facilities in North Bergen, N. J., on U. S. Route 1. The address is Tonnelle Avenue and 34th Street.

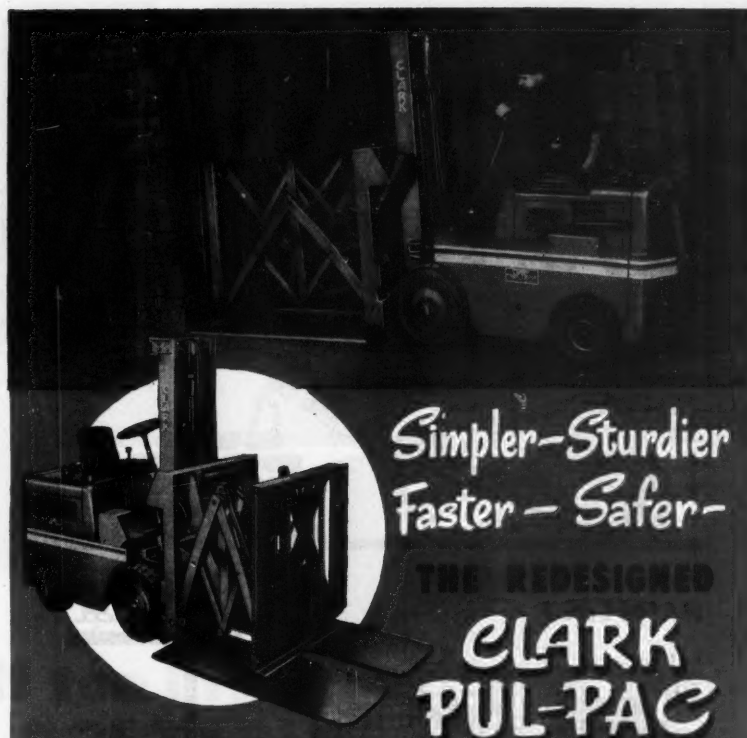
Alfred B. King Company has opened its new offices and plant at 200 Devine Street, North Haven, Conn. The firm was formerly located at 200 Winchester Avenue in New Haven.

J. Alex Gordon & Company is the new name of Gordon & Kinney, Inc. The company is sales representative for the Automatic Transportation Company in the Detroit area. Simultaneously with the name change, Gordon announced the appointment of Edward W. Addis as vice-president.

The General Box Company has announced plans for the construction of a new building to house its executive offices and experimental lab, to be built in Des Plaines, Illinois.

A novel tenth anniversary party was given by Island Equipment Corporation recently at its Long Island City plant. South Sea Island decorations and "Island" girls carried out the "Come to the Island" idea suggested on the firm's invitations.

Mobilift Corporation has announced the appointment of George M. Prescott Company, 1567 East 25th Street, Los Angeles, as a new Mobilift distributor.



**Simpler-Sturdier  
Faster-Safer-**

**THE REDESIGNED  
CLARK  
PUL-PAC**

**"Where it's applicable, it's unbeatable"**

A hydraulically-operated pantograph-type linkage extends and retracts the pusher-rack and gripper-jaw, with these important advantages:

- shorter hydraulic stroke, more powerful piston
- elimination of bending forces to which old-type longer piston was subject
- increased operating speed
- all PUL-PAC mechanism in front of uprights—maximum visibility and safety.

A great money-saver since the day it was introduced, the PUL-PAC eliminates the conventional space-consuming pallet and handles unit loads assembled on low-cost carrier sheets. Today's re-designed PUL-PAC does that job more efficiently and more profitably. Simpler, sturdier, faster, safer, it reaches new heights as a money and manpower saver.

The PUL-PAC method might be the most efficient, the most economical for your operation. Check on it with your Clark Dealer—he's listed in the yellow pages of your telephone directory. Or send the coupon, attached to your business letterhead, for PUL-PAC literature.



**CLARK** ELECTRIC AND GAS POWERED  
**FORK TRUCKS**  
AND POWERED HAND TRUCKS • INDUSTRIAL TOWING TRACTORS



INDUSTRIAL TRUCK DIVISION • CLARK EQUIPMENT COMPANY • BATTLE CREEK 13, MICH.

Please send: ☐ PUL-PAC literature ☐ Condensed Catalog.

Name \_\_\_\_\_  
Firm Name \_\_\_\_\_  
Street \_\_\_\_\_  
City \_\_\_\_\_ Zone \_\_\_\_\_ State \_\_\_\_\_

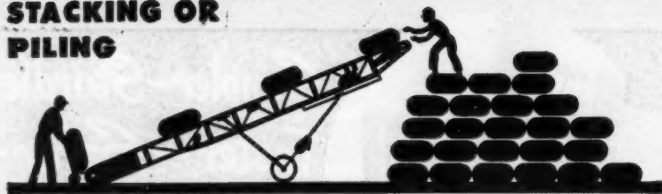
AUTHORIZED CLARK INDUSTRIAL TRUCK PORT AND TRUCK STATIONS IN FOREIGN COUNTRIES

Circle No. 22 on Reader Service Card for more information

# Handle Packages?

**FARQUHAR CONVEYORS**  
**SAVE YOU MONEY**

## STACKING OR PILING



## FLOOR TO FLOOR HANDLING



## MOVING HORIZONTALLY



## LOADING OR UNLOADING



**Farquhar**  
**CONVEYORS**  
**SAVE YOU MONEY**

No matter what you move . . . packaged goods, coal, aggregates or bulk materials in any form, Farquhar has the right conveyor to do your job faster, better, cheaper! Tell us your handling problem and we'll send you the information you need!

**Mail the coupon today!**

A. B. FARQUHAR CO., Conveyor Division, Dept. M-06  
142 N. Duke St., York, Pa. or 618 W. Elm St., Chicago 10, Illinois  
Please send me data on Farquhar Conveyors. I handle packages ( ) under 100 lbs. ( ) 100 lbs.  
( ) 200 lbs. ( ) 300 lbs. ( ) 500 lbs.

NAME.....TITLE.....  
COMPANY.....  
ADDRESS.....  
CITY.....ZONE.....STATE.....

HYDRAULIC PRESSES • FARM EQUIPMENT • FOOD PROCESSING AND SPECIAL MACHINERY  
Circle No. 23 on Reader Service Card for more information

## LITERATURE featured in ads

Need more hand platform trucks quick? Hoosier Fence Co., Inc., can deliver immediately. Its new catalog shows the complete Hoosier line for you to choose from.

Circle No. 63 on Reader Service Card

You can stack more, use less floor space using the racks Unistrut Products Co. makes. Unistrut's Catalog 600 shows the complete line.

Circle No. 34 on Reader Service Card

International Paper Company doesn't claim it has a bag closer that will never break down—it just says its machines come as close to being wear-immune as you can get. Booklet 250-L tells about them.

Circle No. 80 on Reader Service Card

Tilting dock ramps, straight platform lifts and sidewalk elevators are on display in Wayne Pump Company's latest booklet.

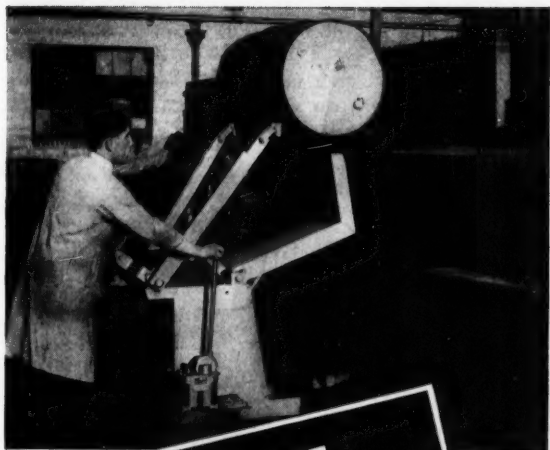
Circle No. 88 on Reader Service Card

Elevator sills make up the difference between plant floor levels and elevator floor levels to prevent elevator accidents and keep material moving. Alexander Sill Company's Catalog F show what the sills will do.

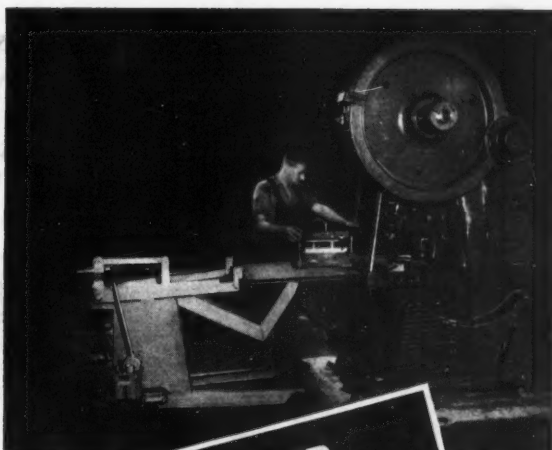
Circle No. 48 on Reader Service Card

Rugged, laminated kraft sheets reinforced with sisal fibres go into the Fibereen protective paper The Sisalkraft Company makes. Free samples and the full data are yours for the asking.

Circle No. 83 on Reader Service Card



**RAISE  
HANDLING  
VOLUME**



**LOWER  
HANDLING  
COSTS**

# with the half ton lift capacity of the PORTABLE NEWTON "HYDRATRUCK"



The Newton "Hydratruck" is a light, easily maneuverable lift truck that will raise or lower loads of  $\frac{1}{2}$  ton up to 5 feet in less than a minute. It does your lifting job quicker, cheaper and more easily.

Units are equipped with either hydraulic power pump or hand-pump or both.

A  $\frac{3}{4}$  Horse Power motor is required to operate the hydraulic pump.

Simplify your handling problem. Investigate the Newton "Hydratruck" today. For full details write, phone, or visit

A LIMITED NUMBER OF  
DISTRIBUTORSHIPS STILL OPEN



**GINSBERG MACHINE CO., INC.** 224 FIFTH AVENUE, N. Y. 1, N. Y.  
SOLE AMERICAN REPRESENTATIVES OR 9-1700



*The right spot*



What is the right spot for a PAYLOADER? It's any place inside your buildings or in the yard where bulk materials are being handled by laborious or other obsolete methods. Thousands of these special tractor-shovels are in "right spots" today cutting costs, solving manpower shortages and increasing output.

PAYLOADERS are able to pay for themselves in a few months because they are designed for the specific job of handling bulk materials of all kinds — loading, unloading, scooping, lifting, carrying, dumping and spreading. Outstanding reasons for the performance and acceptance of PAYLOADERS include: short, compact, space-saving design; multiple reverse speeds; large pneumatic tires that permit operation indoors and outdoors . . . on paved or unpaved areas; simple, easy operation; complete hydraulic bucket control.

The 12 cu. ft. model HA shown is an outstanding box car unloader. It is the smallest of six PAYLOADER sizes which range up to 1½ cu. yd. bucket capacity. Every PAYLOADER is backed by 30 years of manufacturing experience and by a world-wide Distributor service organization. The Frank G. Hough Co., 731 Sunnyside Avenue, Libertyville, Illinois.

*Write for* literature on PAYLOADERS and the name of your Hough Distributor. He'll be glad to help you find the "right spot" for the right size of PAYLOADER in your operations. No obligation.



- Unload box cars.
- Dig and carry fertilizer, chemicals, other bulk materials.
- Clean up gangways, aisles and other areas.
- Load and unload trucks.
- Load box cars.
- Feed conveyors, elevators, hoppers, mixers.
- Charge mullers, tumbling barrels.
- Lift-haul-push-pull.
- Stockpile coal, coke.
- Remove snow.



**PAYLOADER®**  
THE FRANK G. HOUGH CO. • Since 1920



Circle No. 25 on Reader Service Card for more information

MARCH, 1951 • FLOW



Electric counters—small or large—are Production Instrument Company's business. Its catalog gives you a look at all the different types Production makes.

Circle No. 102 on Reader Service Card

A Hapman tubular conveyor system will solve almost any flowable material handling problem, according to Hapman Conveyors, Inc. Its catalog shows what they'll do.

Circle No. 67 on Reader Service Card

Sauerman scrapers make quick work of bulk handling, indoors or out. A new catalog published by Sauerman shows installations covering almost every problem.

Circle No. 95 on Reader Service Card

B. C. is Pittsburgh Steel Products Co.'s abbreviation for "Before Cargotainers." Pittsburgh says if you're operating without Cargotainers, you're missing a bet; better take a look at the new Pittsburgh catalog.

Circle No. 32 on Reader Service Card

The tire that won't roll off—that's what Bronco Rubber Products Co. calls its new Bronco industrial wheel. Catalogs show all the sizes and types Bronco has for you.

Circle No. 96 on Reader Service Card

Little Hustler portable elevators are usable anywhere. If your working heights and layouts change a lot, they're a natural. Maxy-Fran Engineering, Inc., has a catalog that shows what they might do for you.

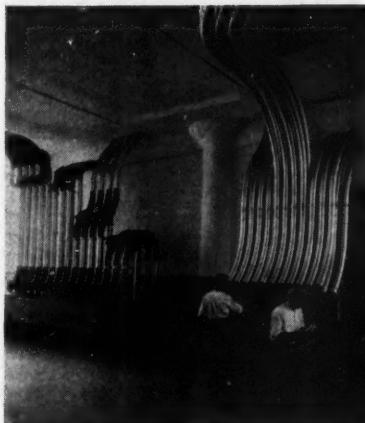
Circle No. 93 on Reader Service Card

# SURPRISING SAVINGS\*

...Reported by  
Users of



## STANDARD PNEUMATIC TUBE SYSTEMS



Orders — Messages — Money — Merchandise  
Swiftly and Safely Carried by Air — At  
Lowest Cost.



### \* SAVES \$8,000 IN 12 MONTHS:

Large drug wholesaler increases flow of filled orders per day by 10% — eliminates telephones and attendants — cuts waiting time 50% — with \$2,500 pneumatic tube system.

### \* SAVES \$6,000 IN 2 YEARS:

Nationally-known electrical supply and appliance distributor speeds shipments — expedites orders — eliminates costly messenger service — with \$2,500 pneumatic tube system.

### \* SAVES \$10,000 IN 9 MONTHS:

Prominent Midwest optical manufacturing company cuts costs and speeds handling of merchandise, cash, records with \$5,000 pneumatic tube system.

The above are representative examples of the substantial savings gained by users of Standard Pneumatic Tube Systems (names of the companies and complete data on operation of the systems given on request).

Department stores, wholesale distributors, hospitals, hotels, mail-order houses, insurance companies,

banks, publishers, schools, utilities — rely on Standard Pneumatic Tube Systems for swift, safe transport and communication between departments. These systems have wide application — write for information for your business.

#### STANDARD CONVEYOR CO.

General Offices: North St. Paul 9, Minn.  
Sales and Service in Principal Cities

STANDARD PNEUMATIC TUBE SYSTEMS ARE BUILT BY THE MAKERS OF



Write for Bulletin  
No. 11 describing  
representative  
installations and  
savings achieved by  
Standard Pneumatic  
Tube Systems.  
Address Dept. FL-31



GRAVITY & POWER  
CONVEYORS

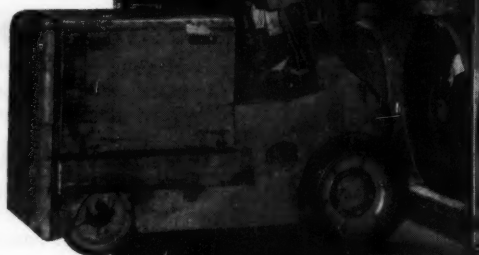
Circle No. 26 on Reader Service Card for more information

Be sure  
you get the  
**RIGHT ONE!**

WHETHER your problem is handling rolls or cartons, bags or crates, be sure you pick a battery-electric truck to give you the utmost in dependability and dollar value. Battery trucks are an outstanding investment. They use smooth-starting electric drives; need no warm-ups or tune-ups; use no inflammable fuel; run with a minimum of down-time; use no power during stops. That's why they can't be beat for top-notch performance at rock-bottom cost.

★

Picking the right battery for your truck is equally important. Edison batteries are *really* dependable because of their rugged construction: their cells are built of steel inside and out, and their electrolyte preserves steel. They are not injured by accidental short-circuiting or reverse charging... or freezing... or laying up without attention. Users will tell you that Edison batteries take jars, jolts and accidents as part of the day's routine... and pay for their keep in short order because they stay on the job, out of the repair shop!



WRITE TODAY for free booklet SB 2039 and a current price quotation. You'll find Edisons cost little more than other makes of batteries... and they pay this back over and over in terms of low upkeep and long, long life.—Edison Storage Battery Division of Thomas A. Edison, Incorporated, West Orange, New Jersey. In Canada, International Equipment Company, Ltd., Montreal and Toronto.



**EDISON**  
Nickel • Iron • Alkaline  
STORAGE BATTERIES



Typical Truck Battery

Circle No. 27 on Reader Service Card for more information

Job-fitted conveyor equipment is Baughman Mfg. Co., Inc.'s specialty. Catalog A-57 from Baughman shows the complete line of conveyor assemblies available.

Circle No. 39 on Reader Service Card

Towmotor Corporation says your break-even point and your handling costs go hand in hand. To keep handling expenses down, Towmotor wants you to take a look at its new catalog that shows the latest in cost-cutting equipment.

Circle No. 36 on Reader Service Card

Picking the right battery for your battery-powered trucks is an important job. Thomas A. Edison, Inc., helps you make a wise choice in its Booklet SB 2039.

Circle No. 30 on Reader Service Card

One way to lick the constant stop-start problem that runs up industrial truck maintenance costs is Yale & Towne's "fluid drive." Yale's new bulletin tells all about it.

Circle No. 6 on Reader Service Card

Thirty-four cents a day pays the power cost of an Exide-batteried industrial truck, according to Electric Storage Battery Co. Along with the cost story, the manufacturer has some other information for you in his latest booklet.

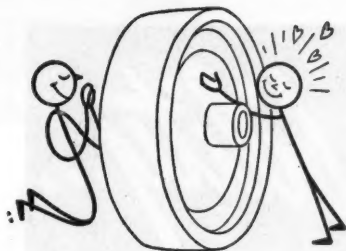
Circle No. 12 on Reader Service Card

Call for a midget instead of a man—that's Coffing Hoist Co.'s advice. Coffing's hoists handle your lifting jobs without taking men away from their jobs. Bulletin FL3MP tells how.

Circle No. 69 on Reader Service Card



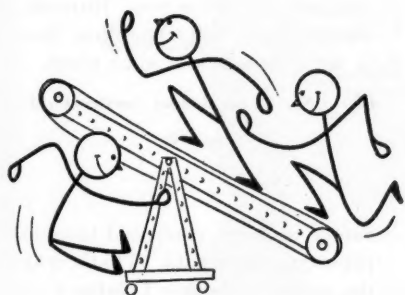
Little ball bearings, who are strong and ambitious...



hope to get grease-packed in-to a Rapistan conveyor wheel



so they can have a long, proud life on a gravity conveyor



or under the belt of a big important power conveyor...



and get into manufacturing, warehousing, or retailing...



maybe travel to Pittsburgh ... or Paris, or Peru...



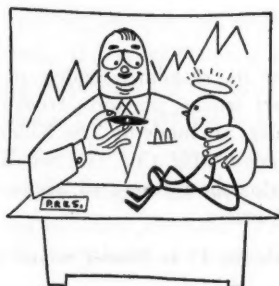
handle all sorts of fascinating products by "flowing" them



faster, cheaper, safer, easier, more capably than ever before...



make lots of good friends among workers who like pleasant jobs



and among executives who love to watch costs dwindle



and among customers who love savings and speedy deliveries...



and who, if they knew, would give 3 cheers for Rapistan "flow"!

**MORAL:** You, too, will think Rapistan Material Flow is wonderful—but if you have any doubts, write The Rapids-Standard Co., Inc., 421 Rapistan Bldg., Grand Rapids, Mich. and we will send literature. (If you have no doubts—send for literature anyway. Absorbing bedtime reading.)

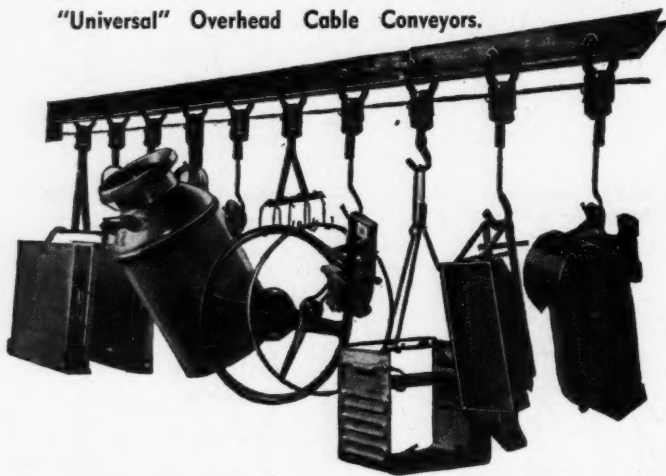
Booth 154-155 Materials Handling Exposition



# Acceptability...

INDUSTRY'S HIGHEST FORM  
OF PRODUCT ENDORSEMENT

Many hundreds of users from motor manufacturers to makers of cigarettes now standardized on Buschman "Universal" Overhead Cable Conveyors.



## HANG IT ALL ON Buschman "Universal" Overhead Cable Conveyors

These Conveyors have been tried, proven and accepted by large and small plants in every industry. Used for cleaning, painting, drying, storage, unloading, progressive operations and other widely varied purposes, "Universal" Cable Conveyor will mechanize your present product handling methods and increase your plant productivity. Write for new Bulletin 41.

- Available Immediately
- Tailored Installations From Standard Stock Units
- Low Initial Cost
- Easy To Install
- Low Maintenance Costs
- Easy To Change

The E. W. Buschman Co., Inc.  
4450 Clifton Ave.  
Cincinnati 32, Ohio



Circle No. 29 on Reader Service Card for more information

The Tote system uses aluminum containers for handling, shipping and storing bulk materials. Tote System, Inc., shows how the bins cut costs in its latest bulletin.

Circle No. 72 on Reader Service Card

Three-dimensional models give you an accurate picture of what layout changes will do for you. Roycraft Models, Inc., will show you how to use its models in your plant.

Circle No. 92 on Reader Service Card

Safety is cheap, compared to compensation payments. That's why the safety enclosures Calabar Corporation makes for cranes and monorails are worth looking into. Calabar's catalog tells all about them.

Circle No. 49 on Reader Service Card

Prefab pallet racks allow stacking to save floor space without tying up low level material. Equipment Manufacturing makes them, tells about them in its new catalog.

Circle No. 62 on Reader Service Card

Over 95 standard models of two wheel trucks, platform trucks and trailers are made by The Kilbourne & Jacobs Mfg. Co. The new K & J catalog shows them all, gives specs and prices.

Circle No. 43 on Reader Service Card

The Unit 357 is mobile crane made by Unit Crane and Shovel Corp. to travel anywhere — anytime. Unit's new bulletin gives you the complete story on the 357.

Circle No. 11 on Reader Service Card

*The Bell*  
**PRIME-MOVER**



**THE NEW MODEL 15**

## Eleven ways to save man power with the new improved **PRIME-MOVER**

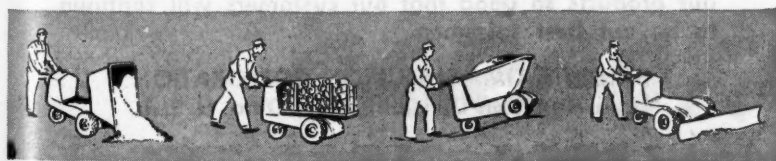
**YOU** know the necessity of employing every efficient device to increase production and to multiply man power. If you are planning your spending with that in mind—the new improved Prime-Mover is a machine that will help you do it.

**These are the helps it can give you:**

1. Moving equipment and tools; 2. Moving work in process; 3. Transporting

bulk items, residue and scrap; 4. Loading and unloading R.R. cars, and trucks; 5. Snow plowing; 6. Carrying maintenance materials; 7. Yard and plant clean up; 8. Hauling liquids, concrete, aggregates; 9. Warehouse and storage carting; 10. General materials handling of loads up to 1/2 ton; 11. Portable power with take-off attachment. (And others that you will discover yourself.) Ask us to arrange a demonstration for you. The Prime-Mover Company, Muscatine, Iowa.

**PUT YOUR LOAD ON A PRIME-MOVER!—AND GO!**



These improvements bring greater service and lower up keep!

1. Forward and reverse drive under power
2. Dependable 5 h.p. 4-cycle Wisconsin engine
3. Self-adjusting, spring loaded clutch
4. Gear driven, constant-mesh transmission
5. Positive operator control on throttle, brake, clutch
6. Turning radius only 33"
7. Bucket and platform quickly interchangeable
8. Engine and fuel tank on top rear of chassis

Circle No. 30 on Reader Service Card for more information



T2100

**LIMA**  
**CRANES**  
**SHOVELS**  
**DRAGLINES**

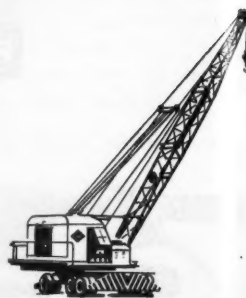
This new trademark is the symbol of a pool of engineering experience that has few rivals in American industry. This important basic resource is reinforced by increased manufacturing facilities, and an expanded organization to serve you.

These things will all contribute to the continuing development that has kept Lima Shovels, Draglines and Cranes always abreast of expanding needs. In the future, as in the past our every effort will be devoted to making our products so good that our customers will continue to be our best salesmen.

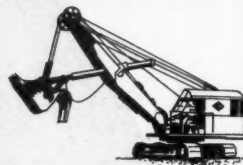
**BALDWIN-LIMA-HAMILTON CORPORATION**  
Lima-Hamilton Division, Lima, Ohio, U. S. A.

**BALDWIN-LIMA-HAMILTON**

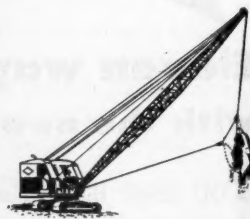
Circle No. 31 on Reader Service Card for more information



**CRANES**—Full range of Capacities up to 110 tons, crawler and rubber mounted. Designed for maximum lift and reach.



**SHOVELS**—Capacities from  $\frac{3}{4}$ -yd. to 6-yds.



**DRAGLINES**—Available in variable capacities.



# Way Back in the Clumsy Days B.C.\*

\* BC (before Cargotainers)—the original patented, palletized welded wire containers—plants expended countless man-

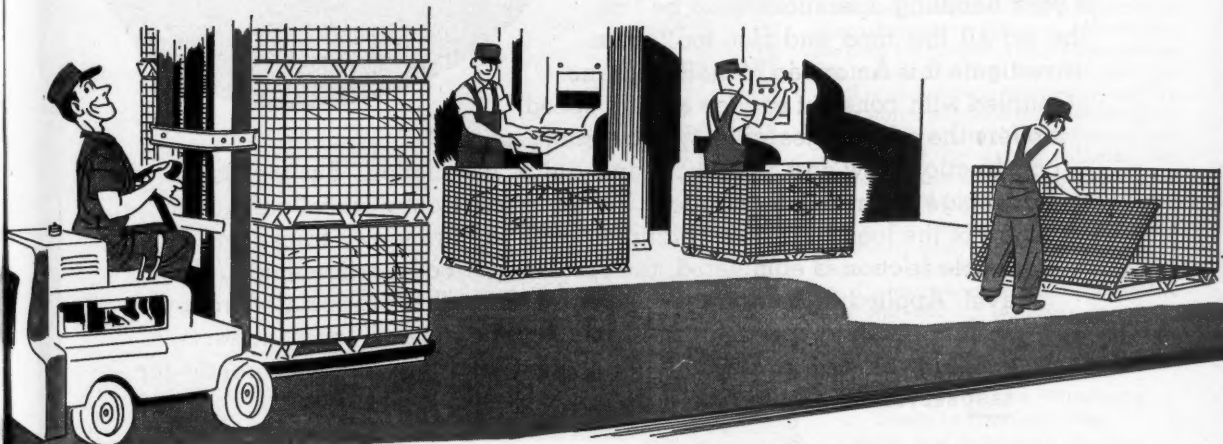
hours transferring parts and goods from car to storage to assembly in an endless number of operations like this:



## Now!

In these enlightened days AC (after Cargotainers) parts and goods are shipped, visably stacked and stored, and moved to assem-

bly or intermediate treatment without removal from sturdy Cargotainers. Then each unit is collapsed flat for easy return to vendor. It all happens like this:



If by some chance, you are still BC why not let a Pittsburgh Materials-Handling Engineer show you how other plants have saved man-hours and storage space

and increased efficiency by joining the AC trend. Write today to Dept. F-1, Pittsburgh Steel Products Company, Grant Building, Pittsburgh 30, Pa.

# CARGOTAINERS

**by Pittsburgh Steel Products Company**

**A Subsidiary of Pittsburgh Steel Company**



HERE'S THE CRANE FOR  
**CONSTANT  
 SERVICE**  
*at* **HIGH SPEED**

If your handling operations must be "on the go all the time and fast, too", then investigate this American MonoRail Crane.

Coupled with constant service at high speed, it offers the advantages of easy movement, rugged construction, low-cost operation and quick installation. But the No. 1 advantage is articulated trolleys. When each trolley wheel carries its share of the load in perfect alignment with the craneway tracks and all possible friction is eliminated, the result is perfectly articulated trolley travel. Applied to American MonoRail Cranes, these articulated trolleys permit operating speeds of 500 feet per minute and constant service. Breakdowns are practically eliminated and the crane is ready for fast service at all times.

An American MonoRail engineer will gladly give you all the details, or write us about the American MonoRail Constant-Service High-Speed Crane.

**THE AMERICAN MONORAIL COMPANY**

13129 ATHENS AVENUE

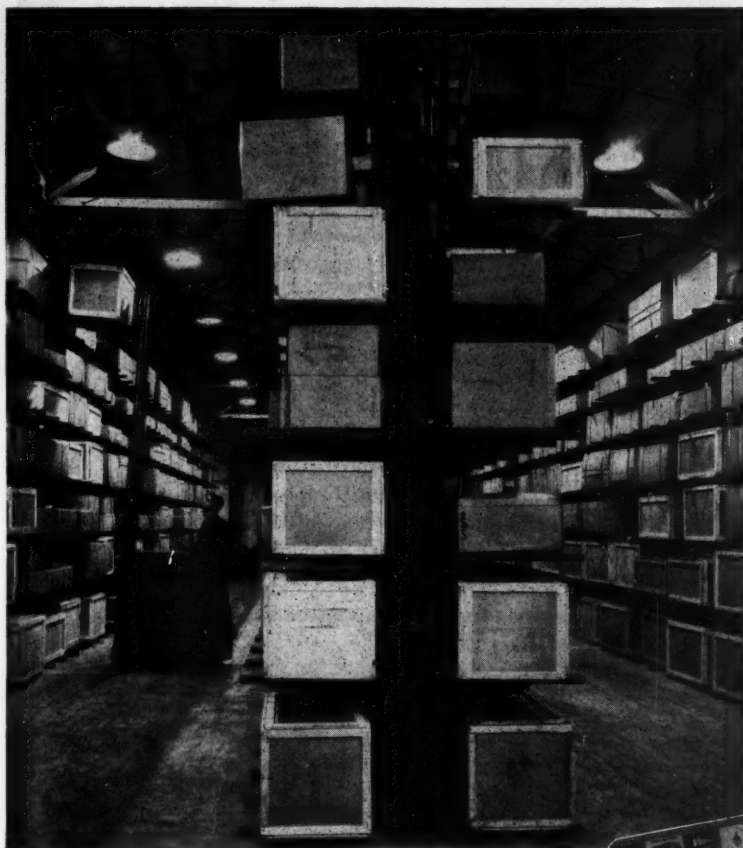
CLEVELAND 7, OHIO

Circle No. 33 on Reader Service Card for more information



# UPS warehousing efficiency with new UNISTRUT RACKS!

**Stacks more goods, uses less floor space, achieves individual selection of boxes and cartons... *No Pallets Needed!***



This rack designed to hold bulky, heavy boxes and cartons, permit quick individual selection. Cantilever Arms are completely adjustable — slide up or down to exact location by loosening one bolt.



The World's Most Flexible All-Purpose Metal Framing

U. S. Patent Numbers  
2327587 2363382  
2329815 2380379  
2345650 2405431  
Other patents pending

**New Free Rack Catalog!**



## ★ the problem

Bradford Dyeing Association, Westerly, R. I., high quality dyers and finishers of cotton and rayon fabrics, had a problem common to the textile and many other industries—namely, the need for careful handling, storage, and rapid selection of boxes and cartons for quick shipment.

## ★ the solution

Bradford and Unistrut engineers put their heads together and came up with a cantilever rack consisting of an H-frame section 14½ feet high with adjustable arms 30 inches long, each pair of which accommodates a 1000 lb load. With 7 pairs on each side, the section supports 14,000 lbs. The fork lift truck places the boxes directly on the arms, eliminating the need for pallets. As the photo shows, any particular box can be selected quickly and directly without disturbing other stored merchandise. Said Mr. E. D. Sylvia of Bradford, "The efficiency and economy of the first installation has been such that Unistrut equipment has been ordered for a second warehouse."

*This is just one of many easy-to-build completely adjustable racks designed by Unistrut engineers for every conceivable use. Unistrut also provides a complete plan and bill of materials for many standard racks illustrated in the new 24-page Rack Catalog No. 600.*

Representatives and Warehouse Stocks in Principal Cities  
consult your Telephone Directory

### UNISTRUT PRODUCTS COMPANY

1013 W. Washington Blvd., Chicago 7, Ill., Dept. A3

Please send Free 24-page Rack Catalog No. 600 and Sample of Unistrut as checked below:

☐ Catalog No. 600 ☐ Unistrut Sample

Name \_\_\_\_\_

Company \_\_\_\_\_

Address \_\_\_\_\_

City \_\_\_\_\_ Zone \_\_\_\_\_ State \_\_\_\_\_

**UNISTRUT PRODUCTS COMPANY**

1013 W. WASHINGTON BLVD. • CHICAGO 7, ILLINOIS

Circle No. 34 on Reader Service Card for more information



*Extra-long plates here...*



*Give you extra power here*

● That's right—and at no extra cost! The positive plates in a C & D Aircool *Slyver-Clad* Battery are 14% longer than those in an ordinary same-size battery! This *extra* measure of power-producing material gives a *Slyver-Clad* Battery 20% greater power-capacity and a 35% longer work-life!

What's the secret? It's a material called *Slyver*—another C & D development. *Slyver* is made from millions of infinitely fine (.0002" dia.) glass fibers laid *parallel* (not in the conventional "jackstraw" pattern) against the positive plates. Four more layers (two layers of glass, perforated plastic retainers, and micro-porous rubber separators) complete C & D's Five-Fold method of insulation and retention—the most effective method yet devised. Because of this insulation and retention, less sediment falls, therefore less sediment space is required; and this saved space is put to work with extra-long positive plates.

Yes, to get *more* battery in any given space—it pays to specify C & D!

**C & D**

**BATTERIES, INC.**

OF CONSHOHOCKEN, PA.

(in the Philadelphia Area)

**SALES AND SERVICE**

Boston, New York, Philadelphia, Syracuse, Buffalo, Pittsburgh, Washington, Atlanta, Jacksonville, New Orleans, Cleveland, Detroit, Chicago, St. Louis, Minneapolis, Dallas, Denver, San Francisco, Los Angeles, Portland, Seattle

**C & D BATTERIES, INC.**  
CONSHOHOCKEN, PA.

I'm interested in knowing how C & D Aircool *Slyver-Clad* Batteries can help cut my handling costs.

Please send me: ☐ literature. ☐ a representative.

NAME \_\_\_\_\_

COMPANY \_\_\_\_\_

ADDRESS \_\_\_\_\_

CITY \_\_\_\_\_ STATE \_\_\_\_\_

# Letter from a reader

## CARRIER CORPORATION



AIR CONDITIONING • REFRIGERATION

300 SOUTH GEDDES STREET • SYRACUSE 1

Editor  
Flow Magazine  
1240 Ontario Street  
Cleveland 13, Ohio

Dear Mr. Editor:

Your readers may be interested in the details of Carrier's extensive fork truck driver training program. Our management has invested in this program because they know that a well trained driver pays off the price of new handling equipment with increased productivity and reduced maintenance costs.

Here's what we've done: new employees get a briefing from the instructor and then start on a primary obstacle course. We make our trainees take trucks through an aisle with only an inch clearance and teach them how to handle a vehicle in intersecting aisles. We also teach the correct way to spot and pick up loads. And that's not all. Each student is instructed in maintenance procedures—with training films and with actual models. All in all it adds up to a thorough program.

Training courses at Carrier are designed for everyone. Even our supervisors work with the company's fork trucks. In that way, everyone gets the same thorough education.

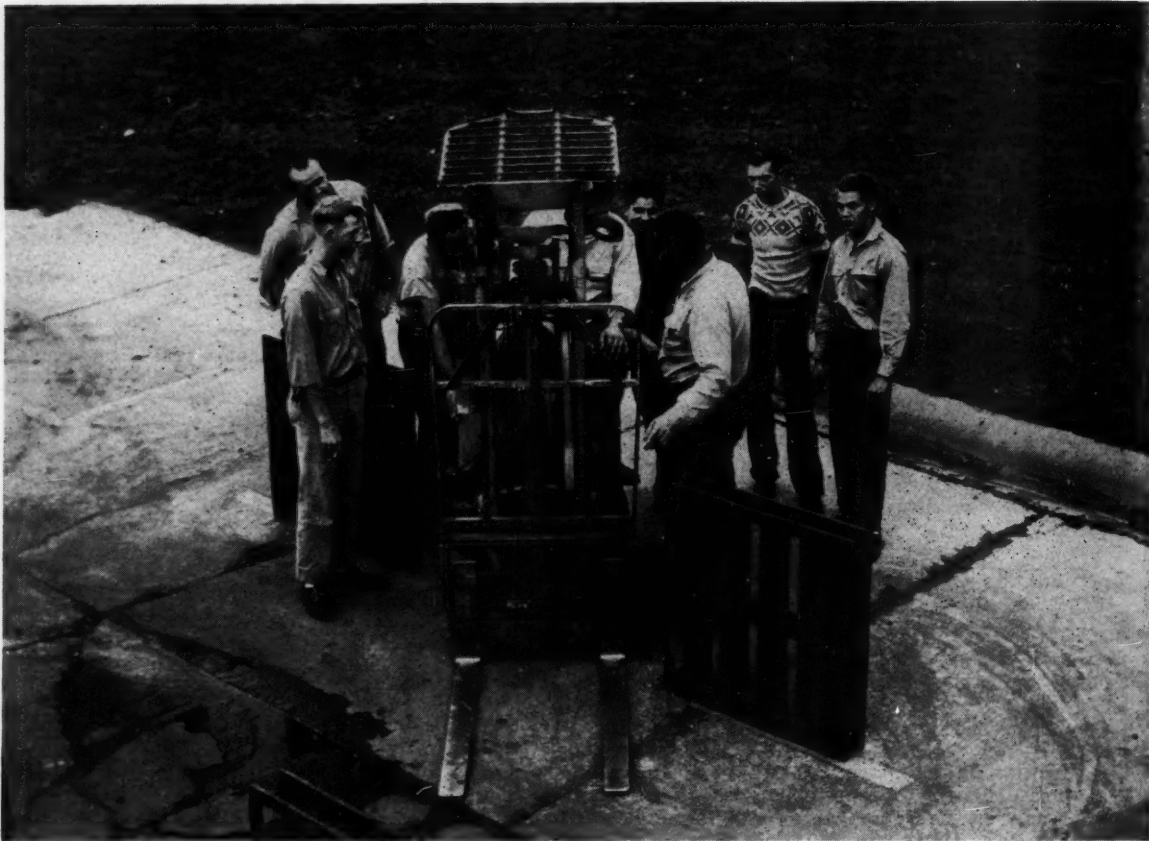
With this letter I am sending some photos that show how we make every truck driver a trained driver. I can not overemphasize the importance of such a program for every plant—big and small.\*

Very truly yours

A handwritten signature in dark ink, appearing to read "H. W. Pennoch".

\*Turn the page to see pictures of the Carrier training program.

**"Every truck driver a trained driver—that's our target."**



**"New employees get a thorough briefing from the training instructor long before they ever go through their paces on the primary obstacle course."**



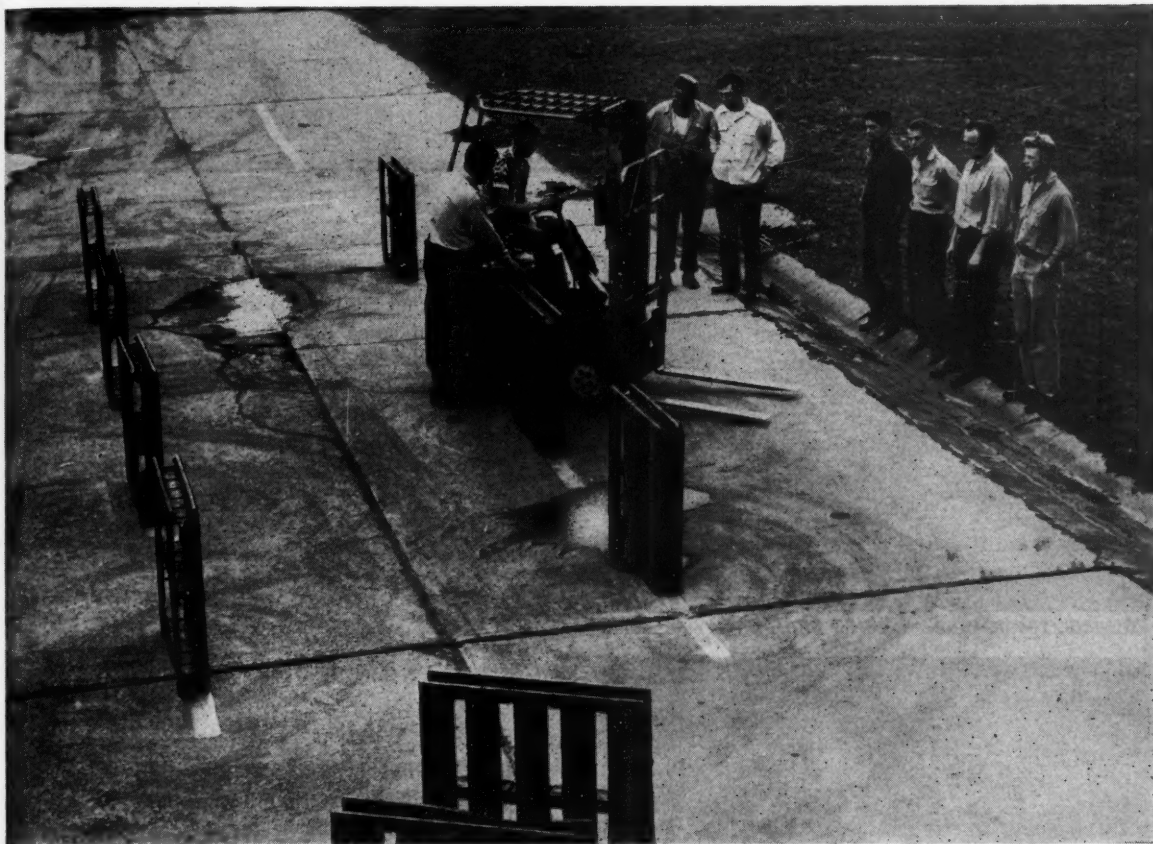
**"How to handle a truck in intersecting aisles and when spotting material is taught by this training instructor."**



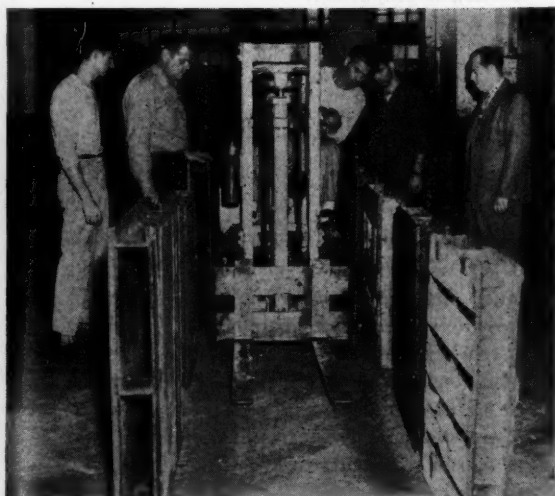
**"Classroom talks on truck maintenance and operation are kept lively with films and slides. This two-way approach pays off."**



"We start new men off in a safety frame-of-mind, keep them that way."



"Other students watch a trainee on his first time out, learning how to ease his truck through staggered pallets that mark the course."

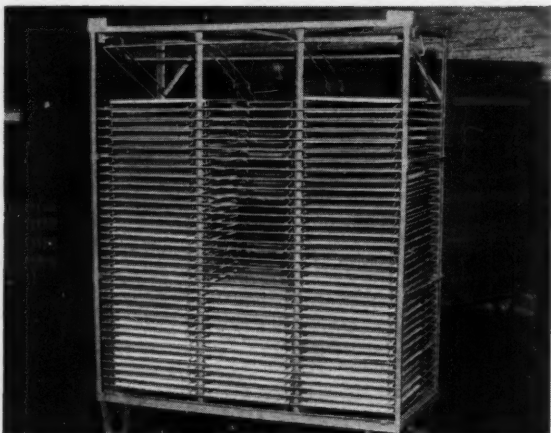


"Getting a truck through an aisle with only an inch clearance on each side takes some doing. Here's a new man learning how."

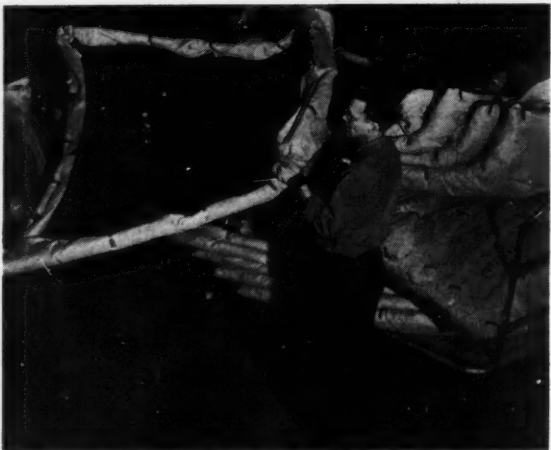


"Keeping a truck in good shape cuts the chances of accidents, too. This student driver is giving his machine a lube check."

## COST CUTTING BRIEFS...



Circle No. 104 on Reader Card for info. on this equipment.



Circle No. 105 on Reader Card for info. on this equipment.



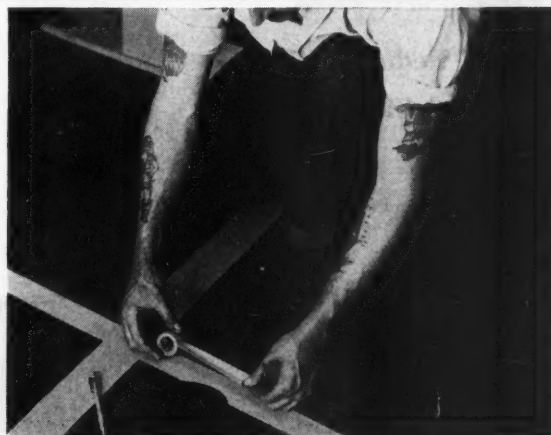
Circle No. 106 on Reader Card for info. on this equipment.

**BOOK-TYPE RACKS** used by Hotpoint, Inc., are racking up big savings in time and money for the appliance manufacturer. Enameled stove panels are easily loaded onto each shelf and locked into position by un-notching the shelf above and dropping it on top the panel. A locking bar on top the rack is pulled forward to lock the whole load during shipment. Unloaded, all shelves are in position and the rack is ready for reloading, starting at the bottom. Rack has a skid base.

**LIGHT WEIGHT PROTECTION** of its automobile hoods during shipment—that's what Kaiser-Frazer Sales Corporation gets, using 90 pound crepe kraft wrapping with a  $\frac{3}{16}$ -inch excelsior filler. The waterproof wrap allows the hoods to be telescoped in storage, too. Metal clips keep the wrapping tight through the roughest trips. Same paper, without excelsior, protects K-F bumpers and molding in shipment.

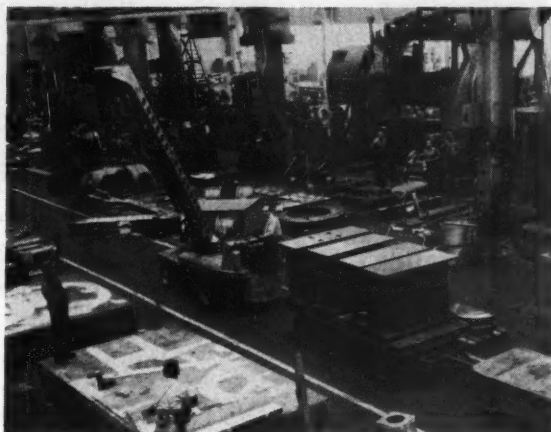
**THAWING WINTER ORE** shipments is done on a mass-production basis at U. S. Steel's South Chicago plant. Four old locomotives provide steam piped through the thawing system. Steam shot through a steel jet takes about eight hours to thaw a carload of the ore. This is the first wintertime rail shipment of ore ever made: the company's mills need off-season shipments to keep up with defense work schedules.

**TRUCKING LANES** and safety area stripes can be mapped out on your floor and changed in a hurry when they have to be, if you use "Scotch" tape for the marking job. The plastic film can be put down by maintenance men without any of the work interruption that usually goes with painting. The tape resists acids, alkalis, water, salt water, alcohol and gasoline.



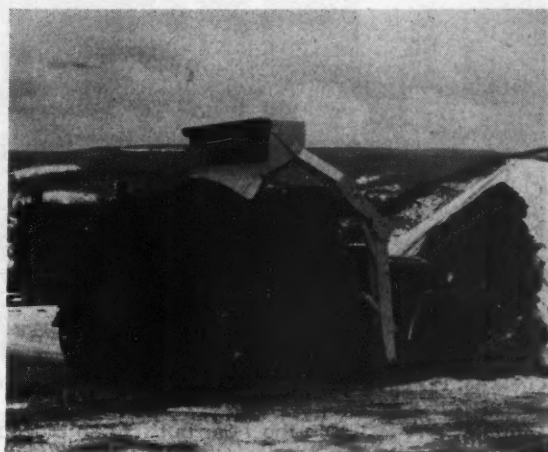
Circle No. 107 on Reader Card for info. on this equipment.

**OUTSIDE EQUIPMENT INSIDE** makes a lot of sense at General Electric's Schenectady works. Here a portable 20-foot extension boom crane is being used to move heavy material from one part of GE's huge plant to another; maybe some of your equipment that you've been thinking of as strictly "yard" material deserves an inside tryout. For quick spotting of very heavy loads, small cranes are naturals.



Circle No. 108 on Reader Card for info. on this equipment.

**COLD WEATHER COMFORT** and all-weather handling speed is what this front-end loading attachment provides. In wintry weather, the truck operator sits in his heated cab and throws a load into the trailer in jig time. The device saves time that's usually spent jockeying the truck into position for rear-end loading.



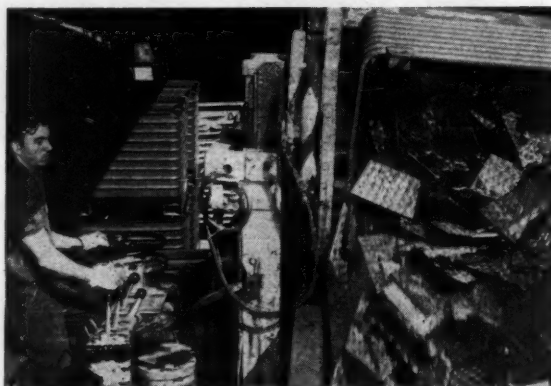
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## Cost Reduction Quickies

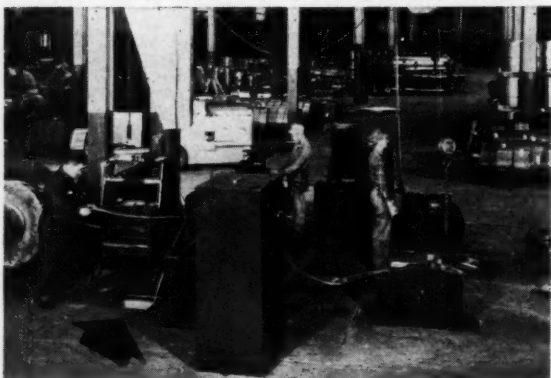
### AT Hotpoint



Circle No. 110 on Reader Service Card for more information

**A FORK TRUCK** with a revolving head easily dumps loaded skid bins in a gondola car. Bins now have sleeves.

### At KHP Steel



Circle No. 112 on Reader Service Card for more information

**ITS ONLY A HOLE** in the floor but it is so placed that scrap from the splitter falls through the floor into a bin.

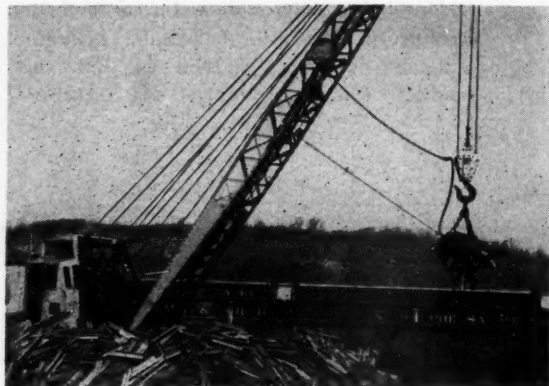
# Eight Methods fol

## (Part II—The February issue contained

Just in case you haven't had your fill of ways to handle scrap, here are eight more handling ideas used by leading plants. It should be clear that the types of equipment which can be used are almost unlimited.

Maybe your own particular requirements are not answered by any of the installations presented in this

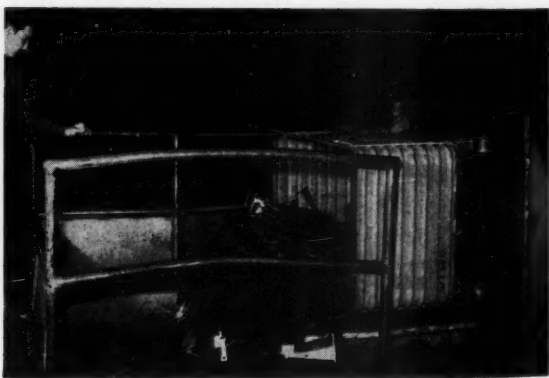
### At W. Virginia Steel



Circle No. 111 on Reader Service Card for more information

**YARD CRANE** equipped with a magnet makes easy work of scrap piles. Smaller cranes are effective in the plant.

### At Chevrolet—Cleveland



Circle No. 113 on Reader Service Card for more information

**THIS SKID BIN** is equipped with casters for easy rolling. It is locked on pivoting floor section and easily dumped.

# s Handling Scrap

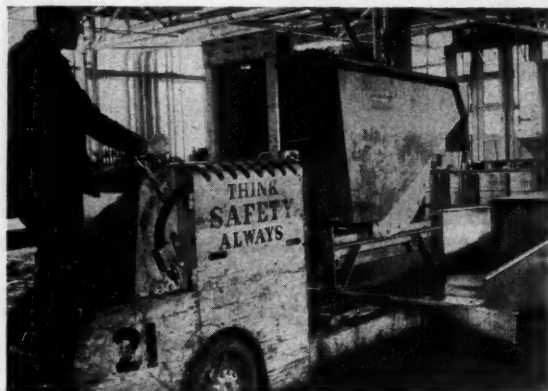
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four case studies of this vital problem.)

survey. However, it is pretty difficult to imagine that some of the ideas can not be adapted to fit your own needs.

If you really think you have the problem to end all problems, drop us a note and we'll see if we can't throw some information your way.

## At Chevrolet-Cleveland



Circle No. 114 on Reader Service Card for more information

**FORK TRUCK** with a self-dumping hopper approaches bin with swinging doors at rear. Driver doesn't leave truck.

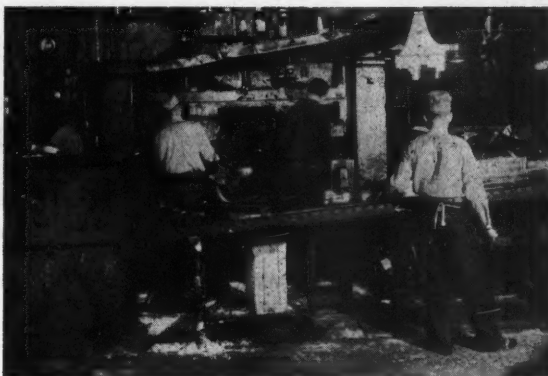
## At Geometric Stamping



Circle No. 116 on Reader Service Card for more information

**PORTABLE INCLINED CONVEYOR** is spotted at the rear of any press and discharges scrap into container.

## At Geometric Stamping



Circle No. 115 on Reader Service Card for more information

**SELF-DUMPING HOPPERS** are spotted at either side of this press. Operators toss light scrap into either one.

## At Your Plant?



Circle No. 117 on Reader Service Card for more information

**THIS MAGNET** is suspended from and receives power from fork truck. Magnets are ideal for picking up odd scrap.



**Cost Reduction  
Quickies**

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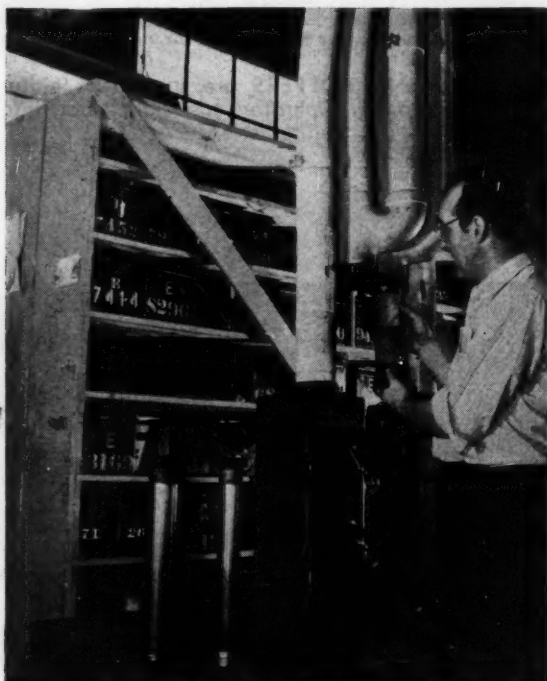
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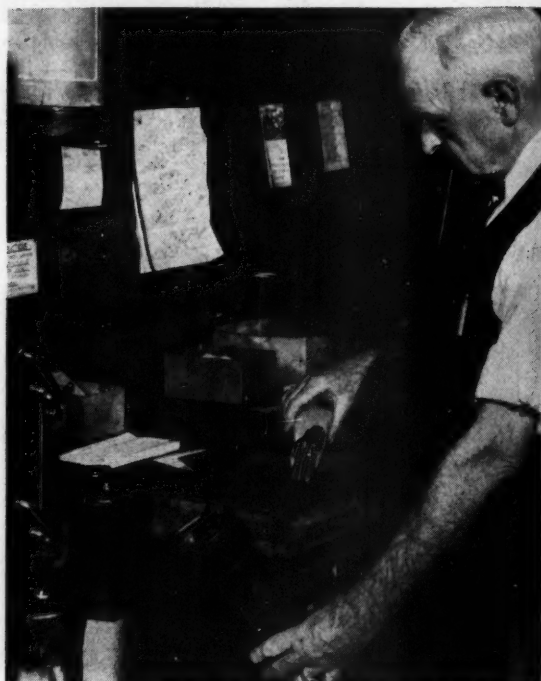
Circle No. 118 on Reader Card for info. on this equipment. \_\_\_\_\_

**10:28 A RIVETING MACHINE OPERATOR** notifies her jobsetter that she needs more parts. He writes up an order, stuffs it in the pneumatic tube.



Circle No. 119 on Reader Card for info. on this equipment.

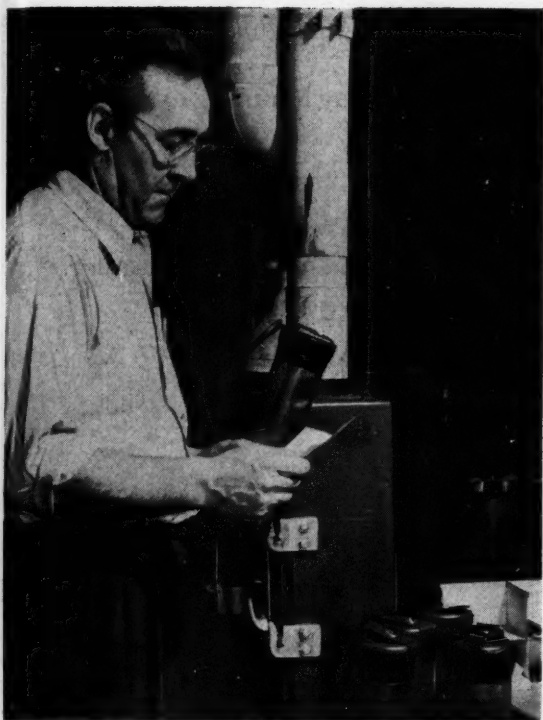
**10:31 HIS ORDER FILLED**, the storekeeper stuffs the parts into the cartridge, shoots them to the assembly line.



Circle No. 120 on Reader Card for info. on this equipment.

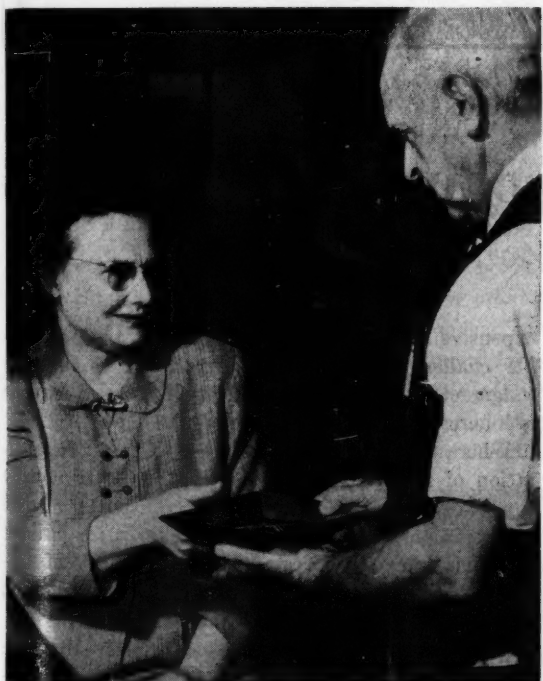
**10:32 JOB-SETTER** picks up his order, checks it for quantity and right kind of part. After checking it out, he delivers it.





Circle No. 121 on Reader Card for info. on this equipment.

**10:30 SECONDS LATER**, order is in stock room; the storekeeper goes to his bins.



Circle No. 122 on Reader Card for info. on this equipment.

**10:33 FIVE MINUTES AFTER** she puts in her order for more parts, the machine operator has the material she needs.

## Pneumatic Conveyors— Carriers for Small Parts

... minutes mean money—  
and delays on assembly  
lines can be avoided.

To put real zip in the delivery of small parts from its main stockroom to two light-assembly departments, Burroughs Adding Machine Company, Detroit, recently installed a pneumatic tube conveyor.

Burroughs uses over 70,000 different kinds of parts to turn out its line of business machines; getting the parts where they're needed—when they're needed—is a big job. Messengers ambling through a huge plant like this one just wouldn't get the stuff there on time.

The pneumatic tube system shoots orders through the plant fast as an eyewink—it has cut the delivery time on small parts from as much as one hour to less than five minutes. When an operator runs low on parts, she notifies the job-setter. He sends a requisition to the stockroom through the pneumatic tube conveyor. In the stockroom, a store-keeper fills the order and sends it whooshing back through the tube to the operator who needs it.

Burroughs engineers figure the new tube system is better than the others it has tried in three ways: (1) it gives the assembly departments lightning-quick service, keeps operators happy by getting parts to them within minutes after they ask for them; (2) it cuts out the need for messengers, who may be used for more productive tasks; (3) it maintains a smooth flow of parts between the assembly departments and the stockroom.

**Most companies use one of these three methods in figuring handling expenses:**

1. All direct labor, indirect labor, maintenance costs and depreciation are lumped together. This is the least complicated—and the least thorough—of the three systems.
2. Various producing and servicing departments are separated for accounting. The accountant estimates the charges for which these departments are responsible; he generally prorates them to production departments on some computed or arbitrary basis.
3. Different handling expenses are departmentalized, and then breakdowns are made within the departments. Indirect labor within the departments breaks down to include cleaners, material handlers, oilers and inspectors, for instance. Supplies and maintenance are itemized. This detailed itemization goes as far as management thinks it should for an accurate picture of handling expenses.

## Material Handling Accounting Practices

**C. R. Dowd,  
Ernst & Ernst  
Cleveland, Ohio**

Some smaller firms can be controlled effectively without too much record keeping. Then as the business grows, more records are needed; management becomes farther removed from contact with conditions, and depends almost entirely on records and charts and analyses to make decisions.

Nevertheless, no matter how fine the line is drawn, accounting records ordinarily, in my opinion, do not show all of the expenses applicable to material handling, or any other specific function.

There are many hidden costs applying to functional operations which, if segregated in accounting records, would be impractical and administratively

expensive. Such records would be open to considerable challenge, since in any record of this nature judgment as to allocation and application of expense is inherent and may not be factual.

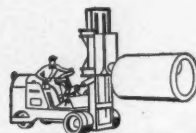
Where industrial firms are large and the transportation of material is involved, we find that usually the indirect labor expenses for transportation are segregated in detail. Incentive standards for indirect labor may have been established on a basis of tonnage moved, trips of trucks loaded and unloaded, or upon some other equitable basis.

Such operations, while they may closely approach total segregation of material handling costs still do not provide information on all phases of such expenses.

For the last twenty years, however, manufacturing  
(Turn to page 56)



**MH\* FOR PAPER.** Standard Towmotor attachments are engineered to simplify and speed-up every operation in handling rolls of paper and newsprint . . . any size.



**MH\* FOR STEEL.** 15,000-lb. bundles of sheet steel, rolls of steel, coils of steel . . . steel products from wire and nails to heavy machinery are handled easily with Towmotor MH\*.



### MH\* FOR WAREHOUSING

Tonnage tripled, storage capacity doubled in warehouses and terminals with ceiling-high stacking and swift freight handling the Towmotor MH\* way.



## LOWER YOUR BREAK-EVEN POINT WITH TOWMOTOR



Your break-even point and your handling costs go hand in hand. Materials handling adds greatly to your production costs, raising your break-even point uncomfortably high. Lower your handling costs with Towmotor Mass Handling . . . and

your break-even point drops. See how other leading industries cut handling costs with Towmotor. Send coupon for a copy of "Handling Materials Illustrated." Representatives in all principal cities in U. S. and Canada.



**MH\* FOR EVERY INDUSTRY.** Large or small, every plant cuts handling costs with Towmotor MH\* . . . proved on the job in more than 10,000 leading plants. Send coupon for more cost-cutting facts!

# TOWMOTOR

THE ONE-MAN-GANG



**FORK LIFT TRUCKS  
and TRACTORS**

**TOWMOTOR CORPORATION, DIV. 8**  
1226 E. 152ND ST., CLEVELAND 10, OHIO

Please send me a copy of "Handling Materials Illustrated," showing how Towmotor Mass Handling reduces production costs in leading industries.

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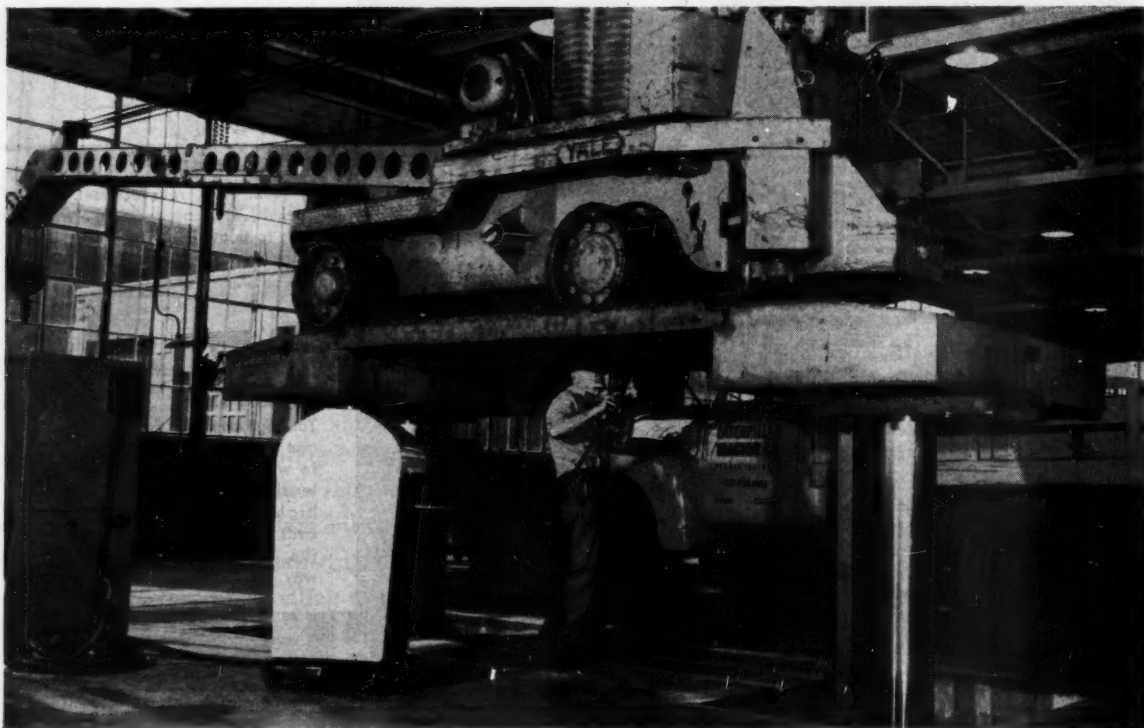
Circle No. 36 on Reader Service Card for more information

\*MH is Mass Handling . . . systematic movement of the most units in the shortest time, at the lowest cost.

FLOW • MARCH, 1951



# Safety and Maintenance Notebook



Circle No. 123 on Reader Card for info. on this equipment.

**HYDRAULIC LIFTS** in Caterpillar's new maintenance shop make vehicle undersides easy to get at.

## Maintenance 'Round the Clock

A 24-hour maintenance shop was set rolling recently at Caterpillar Tractor Company, Peoria, Ill. to keep its industrial trucks and tractors in fighting trim. From now on, any vehicle that needs attention will get it pronto—day or night.

Caterpillar kept one eye on the plans and one eye on morning headlines when it started work on the new shop. Remembering the downtime headaches that went with 1940's defense work speedups, Caterpillar engineers decided to set up a round-the-clock system that will give every vehicle the best possible attention as soon as it needs it.

100 workers in the new shop will run a complete preventive maintenance program for hand-operated and self-propelled vehicles. Caterpillar uses 500 of them to keep material flowing without any hitches through its 400-acre plant. Twenty-five vehicles can

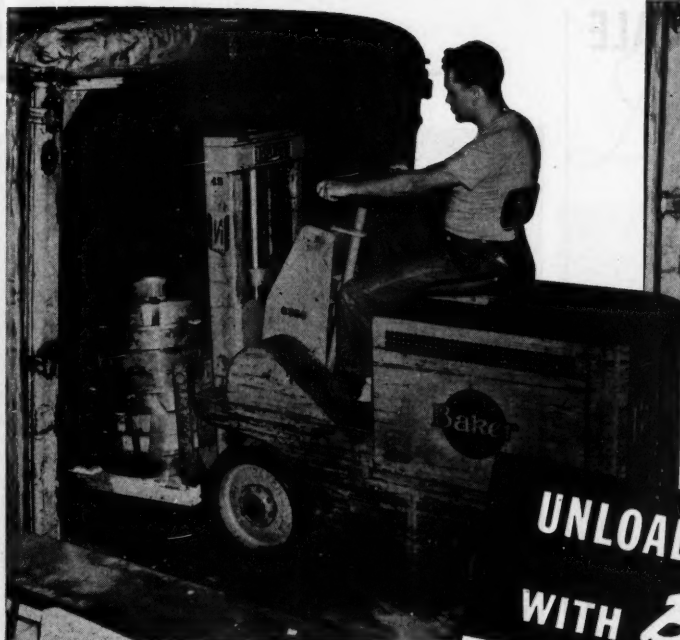
be handled at one time within the 22,000 square-foot area. Trucks start their tour of the shop with a steam bath, then move down a 220-foot center aisle to specialized work areas on each side.

Four service stations in each of the company's principal production areas handle minor repairs, but turn over any major overhaul job to the new shop.

Tailored to Caterpillar's operations, the shop has motor and unit rebuild areas, tire and machine shops, welding facilities, sheet metal and electrical repair facilities. Brake-testing equipment has been set up on the main aisle.

The maintenance program figures to add countless miles to vehicles and makes sure that vehicles will be ready and willing when they are needed in the troubled months ahead.

On page 52 are more details



Baker FT-30, 3000 lb. capacity, truck-loading model. Low nested height of uprights permits easy passage through trailer doors in unloading operation.



Taking the last load from the trailer. Extreme maneuverability makes it easy to mechanize entire unloading operation—a factor in cutting time 60%.

## UNLOADING TIME CUT 60% WITH **BAKER TRUCK**

National Lock Company of Rockford, Illinois has been using Baker Trucks successfully for ten years. On April 28, 1950, the company purchased its ninth Baker Truck—a Type FT (100% functional) 3000 pound Fork Truck—to unload incoming coils of steel from trailers; a job that had been done manually.

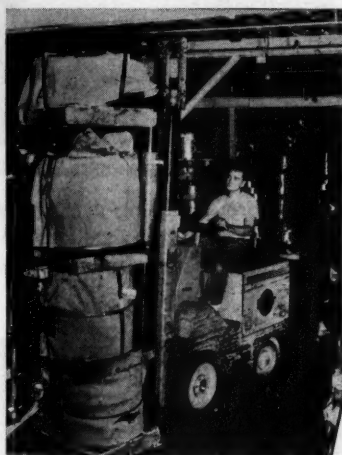
The new truck has achieved the following benefits:

1. Saving in cost of steel by making it possible to order coils from the mill weighing 1100 lbs. instead of 250 lbs.
2. Fewer trips because of larger coils.
3. Easier stacking in storage and placing at machines.
4. Unloading time cut 60%—more for big coils.
5. Reduced turn-around time for trailers.
6. Less space required at trucking area and loading dock.

This truck is a truck-loading model with nested over-all height 69", initial lift 49" and telescoping lift 98"—permitting easy entry into trailer bodies, and high stacking in storage.

A Baker Material Handling Engineer can show you how to make similar savings.

**BAKER INDUSTRIAL TRUCK DIVISION**  
of The Baker-Raulang Company  
1219 WEST 80TH STREET • CLEVELAND 2, OHIO  
In Canada: Railway and Power Engineering Corporation, Ltd.

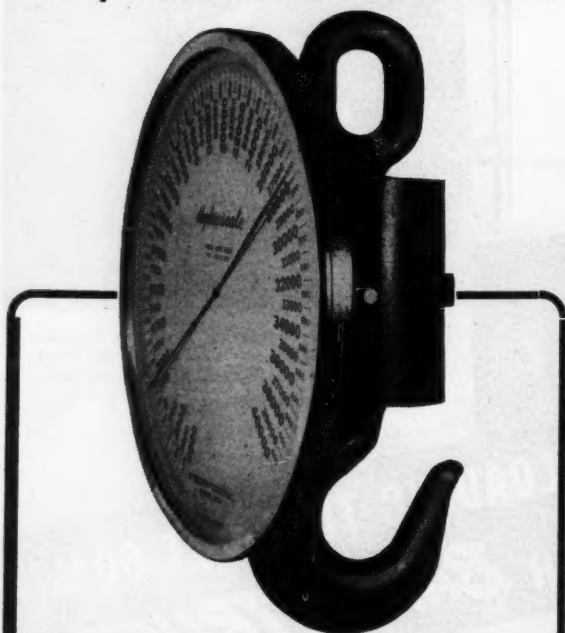


This model has a telescoping lift of 98"—adequate for stacking to the ceiling at National Lock. Wide-angle steer provides maximum maneuverability for operating in narrow aisles and congested areas.

# Baker<sup>®</sup> INDUSTRIAL TRUCKS

Circle No. 37 on Reader Service Card for more information

## The perfected CRANE SCALE



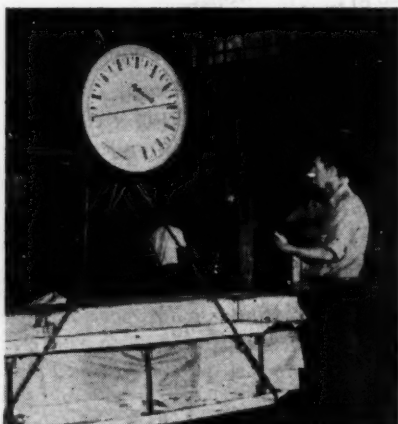
# HYDROSCALE

**WEIGHS THE LOAD . . .  
... AS YOU LIFT IT TO MOVE IT**

An accurate, rugged, low headroom hydraulic crane scale. Equipped with precision laboratory instrument and tempered glass dial cover. Makes it practical to weigh whenever and wherever you lift a load. Eliminates the need for weighing stations. Eliminates work, man power and equipment tie-ups. One plant that tried one now has ten. Practical for shipping, receiving, testing, measuring, inventory.

**3 dial  
sizes  
12"  
24"  
30"**

**Models  
500  
to  
100,000  
pounds  
capacity**



**WRITE FOR CATALOG.**

**HYDROWAY SCALES, INC.**

20694 WEST 8 MILE ROAD, P. O. BOX 4754 - DETROIT 19, MICH.

Circle No. 90 on Reader Service Card for more information

## Maintenance 'Round



Circle No. 124 on Reader Service Card for more information

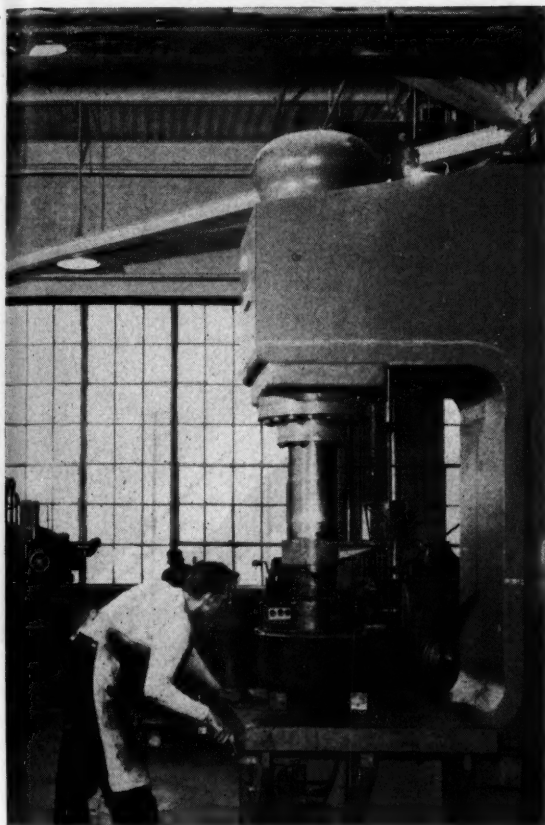
**HAND TRUCKS** get a thorough going-over on a regular schedule. The worker in the background of this photo is brazing a broken fuel line.



Circle No. 125 on Reader Service Card for more information

**FORK LIFT TRUCKS** are kept in top shape by a maintenance program that also takes care of other hand-operated and self-propelled vehicles.





Circle No. 126 on Reader Service Card for more information

**A WORN TRUCK TIRE** is replaced by a shop worker on one of the hydraulic presses. Monorail and hoists are used to move heavy vehicle parts.



Circle No. 127 on Reader Service Card for more information

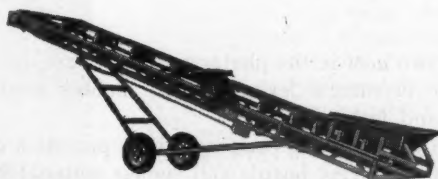
**FOUR SERVICE STATIONS** like this one handle minor maintenance and repair jobs. Tougher assignments are given to the new maintenance shop.

# Delivered PROMPTLY



*A typical installation of Sectional Conveyor assemblies "Job-Fitted" to the efficient operation of this aggregate plant.*

Today three major factors must be considered in the purchase of material handling equipment—performance, price and **delivery**. Baughman Sectional Hi Speed Job-Fitted Conveyor assemblies are built to meet these specifications. Each Baughman Sectional Conveyor is engineered, thoroughly tested and load rated, insuring satisfaction in every installation. Through quantity production of Sectional Conveyor Assemblies it is possible to stock basic units, which insure prompt delivery at lower cost.



The same sectional assemblies and job fittedness is available in portable and permanent Baughman Conveyors. Speedy quotation, prompt delivery and shipment in most cases from stock, allow Baughman to offer immediate action to your inquiry.

*Write for Free Catalog #A-57 or contact your nearest Baughman Industrial Distributor.*



manufactured by  
**BAUGHMAN MANUFACTURING CO. Inc**

**111 E. ARCH STREET**

**JERSEYVILLE, ILL.**

Circle No. 39 on Reader Service Card for more information



Circle No. 128 on Reader Card for info. on this equipment.

**ROLLER CONVEYORS** carry boards to an adjustable platform at the delivery end of the stacking unit.

## New Method for Handling Lumber

The two men in the photograph above are using a Chicago inventor's device to make lumber stacking easier and faster.

Main object of the equipment is to provide a conveyor for carrying boards and similar material from a fixed height—a railroad car, for instance—to a variable height like a pile of lumber. A worker at the delivery end controls traffic: he sends the boards he wants to the men on the pile, or to any other location in the system (feeder lines can be set up to deliver boards anywhere in the yard.)

For years, lumber has been stacked by a man on the ground working with a man on top of the pile. Height of the pile depended mainly on how high the man on the ground could reach.

The new stacker, invented by Walter H. Zeigler, has a roller conveyor which includes a short pivotally supported power section with one end pivotally connected to a feed section. Its other end is rigidly

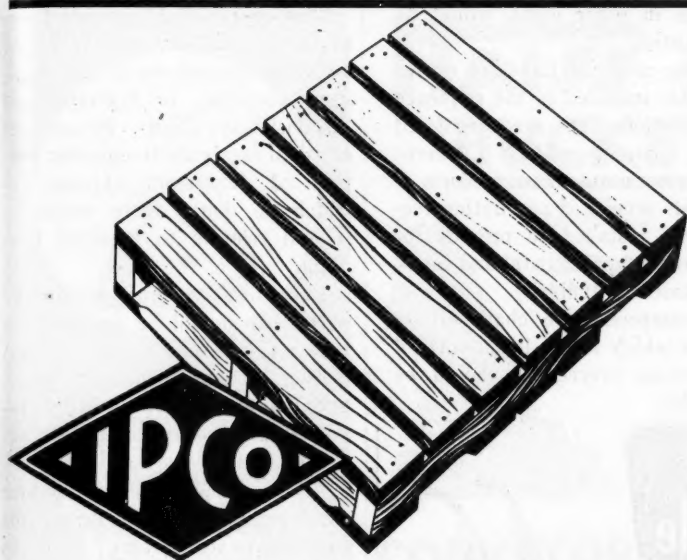
connected to the discharge section. The feed section conveys lumber from the incoming carrier to the power section, which sends the lumber down the discharge section to the delivery end where it is removed by a worker on top the stack.

As the stack grows, the discharge end of the unit is adjusted to a new height.

Stakes needed to space the layers of lumber for air circulation are carried by a platform on the discharge end of the conveyor, within easy reach of the man on the pile.

When the stack has been completed, a fork lift truck takes the lumber from the rack and delivers it to a drying kiln or storage area.

Inventor Zeigler figures his unit allows four men to do the job that used to take seven. It also makes the work safer and faster. And men formerly needed to stack have been freed for more productive tasks in this lumber yard.



• Ask IPCO pallet engineers for practical assistance on your palletization problems. Write today for detailed information. All Standard Type Pallets. Give details of your problem.

Mills strategically located for service in the East.

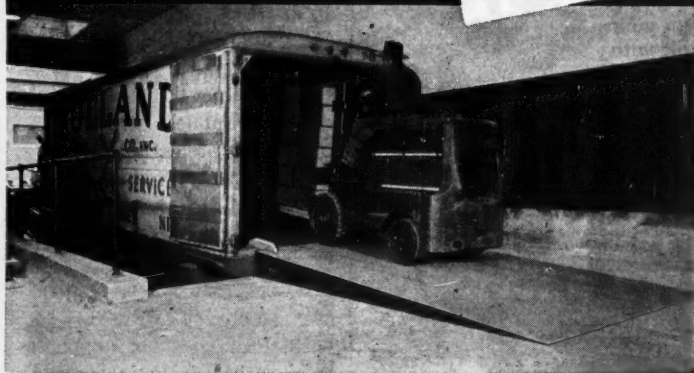
## INDUSTRIAL PALLET CO., INC.

PALLETS EXCLUSIVELY SINCE 1941

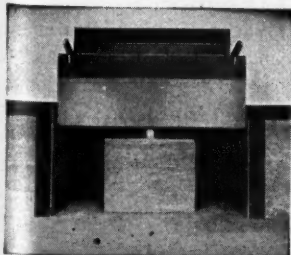
1619 WOOLWORTH BLDG. • NEW YORK 7, N.Y. • TELEPHONE BARCLAY 7-8446-7

## IT'S THE NEW LEVA-DOCK\*

Adjustable Ramp  
For  
Loading Docks



### New hydraulic device keeps dock lined up with truck bed level



The Leva-Dock moves up and down with varying truck bed levels—permits fork lift trucks or other vehicles carrying heavy loads to move directly into trucks or trailers. Users say there's nothing like it. Backed by Rotary's experience on 45,000 hydraulic lifts. Write for Catalog.

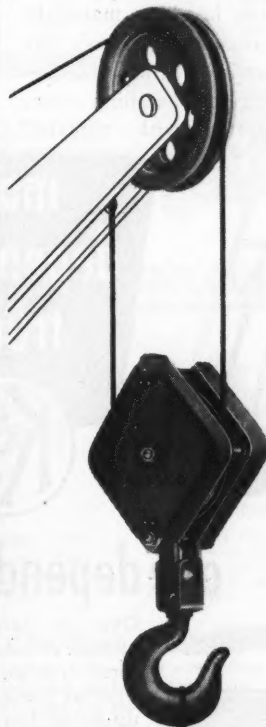
### ROTARY LIFT CO.

1140 Kentucky, Memphis 1, Tenn.

Reg. U. S. Pat. Off.

Circle No. 41 on Reader Service Card for more information

## GET A GOOD LIFT WITH MADESCO TACKLE BLOCKS



A good lift is one that protects your wire rope investment. Check your equipment and replace with Madesco Blocks and Sheaves having Anti-Friction bearings or bronze bushings, to assure longer life for your wire rope. The Madesco complete line includes a block for every purpose.

Write for our complete catalog.

## MADESCO TACKLE BLOCK COMPANY

EASTON, PENNSYLVANIA

Over a quarter century of service  
Circle No. 42 on Reader Service Card



## ACCOUNTING PRACTICES . . .

(Continued from page 48)

expense has become as important as some of our so-called prime costs.

It has been estimated that in many manufacturing activities the greater part of the indirect labor is engaged in handling materials. Over any reasonable period, the potential savings through reductions in material handling costs, when compared with potential

savings in other costs, would be substantial.

Many material handling operations are included in the sequence of operations that are considered direct labor operations. I believe that accountants can perform a valuable service if accounting records are installed to provide for functional departmental and intra-departmental analysis.

A comprehensive chart of accounts which is the framework of accounting procedures should be adopted.

This chart should provide functional departments for the major activities carried on in the business, according to organizational responsibility. Thus, we are enabled to segregate the greater portion of functional expense, of which no doubt there would be several relating to material handling.

Functional accounts within departments should be provided for the major classifications of expense, including indirect labor, maintenance—factory supplies—power—and other variable expenses.

Accounts should be provided for fixed expenses applicable to the functional segregation, such as depreciation—taxes—insurance—and the like. Within this framework it would be possible, in most instances, to determine reasonably, functional expense—material handling, as well as any other.

When considering any change of material handling procedure, it should be possible to call on the accounting department for cost information, such as the following:  
Departmental-Material Handling

1. Wages of individuals engaged in material handling departmental operations.
2. Other expenses contingent upon and because of such operations as:  
Supervision  
Supplies  
Depreciation  
Taxes  
Maintenance  
Expenses—contingent on wages such as: Social Security taxes, compensation, etc.

3. Proration of expenses of other departments which affect material handling.

### Intra-Departmental

1. Wages of individuals engaged in intra-departmental material handling operations.
2. Direct expense.
3. Prorated expense.

### Direct Labor

1. Time allowed for material movement.

(Turn to page 58)



**many dependable trucks**

**K&J**

**one dependable source**

Over 95 standard models of two wheel trucks, platform trucks and trailers. Special trucks and trailers up to 50 ton capacity designed and built to your specification. All built with 80 years of skill by pioneers in the industry. Complete engineering service for special design. Write for catalog or tell us what you need.

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**THE KILBOURNE & JACOBS MFG CO.**

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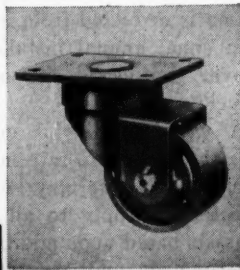
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*for Still Greater*  
**OPERATING  
ECONOMY and  
EFFICIENCY**

*Specify*  
**DARNELL  
CASTERS  
&  
WHEELS**

**A TYPE AND SIZE  
FOR EVERY PURPOSE**  
★



**DARNELL CORP. LTD**  
LONG BEACH 4 CALIFORNIA  
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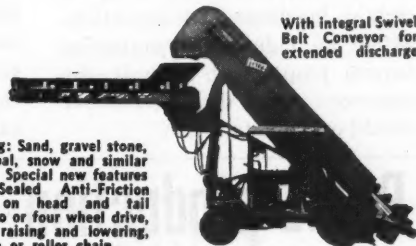
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FLOW • MARCH, 1951

# HAISS Material Handling BUCKET LOADERS

**LOAD 3 TO 8 YARDS PER MINUTE**



One man operation  
Self-Propelled  
Self-Feeding



With integral Swivel  
Belt Conveyor for  
extended discharge

For loading: Sand, gravel, stone,  
topsoil, coal, snow and similar  
materials. Special new features  
include Sealed Anti-Friction  
Bearings on head and tail  
shafts, two or four wheel drive,  
hydraulic raising and lowering,  
manganese or roller chain.

## CONVEYORS • CAR UNLOADERS



**TROUGH OR FLAT  
BELT CONVEYORS**

For loading sand, gravel,  
coal and similar bulk mate-  
rials from cars or piles to  
trucks.



**PACKAGE  
CONVEYORS**

For handling bags, boxes,  
crates, cartons, etc. Port-  
able or stationary mounting.  
All types—All sizes.



**UNDERCAR  
UNLOADERS**

Heavy duty for handling  
crushed stone, gravel, sand,  
coal and similar materials.  
Capacity up to 5 tons per  
minute.

### SECTIONAL CONVEYORS

Channel Frame or Lattice Frame construction made in easily  
assembled individual sections for permanent or portable in-  
stallation. All sizes and capacities available. Trough belt—  
for handling crushed stone, sand, gravel, coal and similar  
materials. Flat belt type—for handling bags, boxes, pack-  
aged materials.



## CLAMSHELL BUCKETS



### EXCAVATING-REHANDLING

Heavy duty buckets for digging and trenching,  
dredging and rehandling. Capacities 1/4 to 3 yards.  
Special narrow buckets available for trenching.  
Ask for bulletin H-850.

For further information write, 'phone or wire. Experienced Hais representatives are  
located in all principal cities.

**George Hais Mfg. Co., Inc. division of Pettibone Mulliken Corp.**

141st to 144th St. on Park Ave.  
New York 51, N. Y.  
'Phone Mott Haven 5-2200

4700 W. Division St.,  
Chicago 51, Ill.  
'Phone Spaulding 2-9300



Circle No. 45 on Reader Service Card for more information

2. Overhead applicable thereto.  
Scrap

1. The incidence of scrap occasioned through material handling.

Pin-pointing of the costs of various functions can be achieved through the use of the project cost method. When it is believed that certain functions and operations within an industrial organization require proper cost analysis, the engineer and the accountant should collaborate.

## Part II—Depreciation

Until the first income tax law was passed in 1913, there had been no consistent depreciation practice followed by business. It was an educational program for the accountant in the early part of the twentieth century to convince business executives that depreciation charges were an expense regardless of the profit position of the Company; they preferred to take depreciation based on the

showing they could make to their stockholders.

The income tax law changed all this. It is now axiomatic to write assets off as fast as is allowable.

Through court decisions, the fact has been established that it is a legal requirement to provide for depreciation and that payment of dividends to the full amount of surplus without provision for depreciation would constitute an impairment of capital.

The purpose of the provision for depreciation has been misinterpreted and confusion has been prevalent because the difference between depreciation expense and replacement expenditures has not been well defined.

According to the Bureau of Internal Revenue, depreciation is an "allowance for wear and tear of property, including an allowance for obsolescence—does not include reduction of market value not resulting from such causes. Annual deductions are amounts the aggregate of which, plus the salvage value, will equal the cost—of the property at the end of its useful life".

In simpler terms, it represents the cost of an asset which will be recovered over the useful life of the asset through annual allowances for such a purpose.

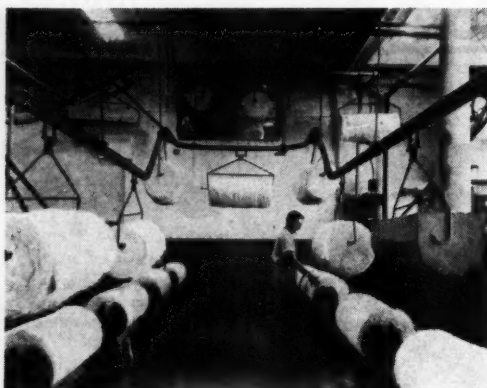
There are several methods by which depreciation charges are computed, as follows:

### 1. Straight Line Method

The allowance for depreciation is deducted from income in equal annual installments over the useful life of the facility.

A variation of this method is the composite rate method in which a rate may be computed to apply to all plant assets based upon additions—retirement and the ratio of property accounts to the depreciation reserve. (This method would take considerable time to explain in full, since it is highly technical, and we will drop it at this point.) It, however, is com-

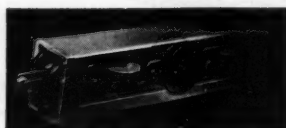
## RAISE production...LOWER costs



Photos: Courtesy Springs Cotton Mills

## with "Zig-Zag" Continuous Power Conveyors

Here you see how "Zig-Zag" solves a complex handling problem in the Springs Cotton Mills at Lancaster, South Carolina. In almost every imaginable industry, R-W "Zig-Zag" Conveyors are serving production and processing lines—increasing efficiency, cutting costs. Specifically designed to carry light loads through confined or crowded areas, "Zig-Zag" is adaptable to almost every plant condition or layout. And the savings effected with R-W "Zig-Zag" Conveyors are so substantial, the equipment pays for itself quickly—in most cases in less than a year! For further information, call, write, or wire our nearest office.



### Engineered for Economy and Flexibility

- Horizontal and vertical units alternate in a continuous chain traveling through special steel tubing.
- Complete flexibility for installation in any plant. Easily installed, easily changeable to conform to plant alterations.
- SAFE—all moving parts are fully enclosed.
- Low first costs. Low Power Factor.
- Standard horizontal or vertical curves—two-foot radius.



**Richards-Wilcox Mfg. Co.**

A HANGER FOR ANY BOOK THAT SLIDES

AURORA, ILLINOIS, U.S.A. Branches in all principal cities

CONVEYORS, ELEVATORS, CRANES, AND ALL TYPES OF MATERIAL HANDLING EQUIPMENT

Circle No. 43 on Reader Service Card for more information



monly used for tax purposes.

## 2. Unit of Production Method

The charges are made in proportion to the use of the facility. It may be based on hours of use, units of production produced, rates per mile of use for transportation of equipment, etc. This method is acceptable in certain instances for tax purposes.

## 3. Diminishing Value Method

This method is one in which the rate is applied to the diminishing value of the asset and the amount of depreciation diminishes each year. Theoretically, it is desirable because repair charges increase yearly and the total of the two would produce a more uniform annual total charge. This method is not generally accepted for tax purposes.

The straight line method is the one most generally used, and in the following remarks reference is made only to this method of computing depreciation charges.

All depreciation is an estimate based normally on the estimated life of the asset. The Bureau of Internal Revenue has set forth as a guide definite rates for certain classes of assets, as follows:

	Estimated Useful Life	Rate of Depreciation %
Hand trucks	10	10
	5	20
	4	25
Service trucks	2	50
Belting	10	10
Elevators	40	2½
	33⅓	3
	20	5
Power shovel	5	20
Steam shovel	10	10
Steam shovels	5	20
	3	33⅓
Dump cars	2	50
Locomotive crane	3	33⅓
Conveyors	5	20
Tank cars	12½	8
Tractors	5	20
	4	25
	3	33⅓

"In Bulletin F (issued by the Internal Revenue Bureau) (as re-

vised January 1942) there is data concerning the determination of deductions for depreciation and obsolescence from which taxpayers and their counsel may obtain the best available indication of the bureau practice and the trend and tendency of official opinion. This bulletin does not have the force and effect of a Treasury decision and does not commit the Department to any interpretation of the law which has not been formally approved and promulgated by the

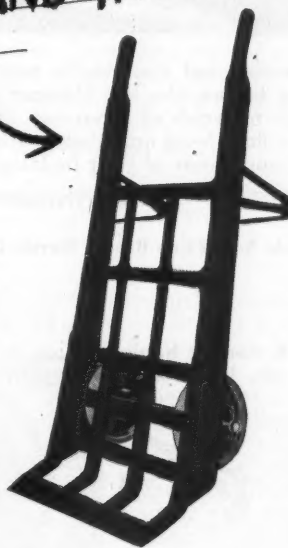
Secretary of the Treasury."

"Taxpayers and officers of the bureau are cautioned against reaching conclusions in any case solely on information contained herein and should base their judgment on all the facts in a particular case."

"Rates herein are set forth solely as a guide or starting point from which correct rates may be determined in the light of the experience of the property under  
(Turn to page 94)

# MAXIMUM UTILITY + LOWEST COST AMERICAN HAND TRUCKS

Take a look at your present materials handling set-up in view of today's all-out production requirements. Increase your output and lower your costs by more timely and efficient moving of materials. Here are some of the advantages American Pressed-Steel Hand Trucks offer:



- "Fingertip Balance"—means easy handling.
- "Steelite® Wheels"—sealed-in ball bearings.
- "Smooth In-set Surfaces"—prevent load damage.
- "Tough Red Enamel Finish"—weatherproofs surfaces.
- "Lifetime Design"—damaged parts replaceable.

Mail the coupon below for more complete information.

**The American Pulley Company** 4290 Wissahickon Ave., Phila. 29, Pa.

Please mail free American Hand Truck Bulletin to:

NAME \_\_\_\_\_ TITLE \_\_\_\_\_  
COMPANY \_\_\_\_\_  
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CITY \_\_\_\_\_ STATE \_\_\_\_\_

Circle No. 47 on Reader Service Card for more information

# NEW PRODUCTS

For more information on these products, use the postcard bound into this issue.

**Dumping units** can save you a lot of time and money by taking the handwork out of your unloading jobs. The Vat Dumper, made by Materials Transportation Company, turns huge loads as much as 135° without any help from the operator. Originally built to speed up

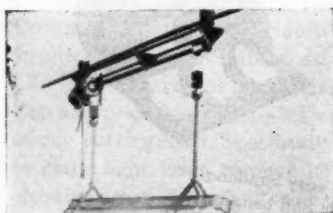


handling and dumping in meat packing and processing houses, the Vat Dumper is a natural for parts, bulk materials or scrap, too. The company makes a two floor level unit that can be used to service two or more floors of your building.

**Materials Transportation Co.**

Circle No. 129 on Reader Service Card for more information

**A double hook hoisting unit** has been developed by the Flinchbaugh Company. The new unit has a reversing motor, trolley, cable and hooks. Flinchbaugh says it should be a natural for handling long items in quantity, for lifting and controlling heavy barrels or drums. It fits any



size tub for handling small parts, chips, waste, or anything else suitable to convey and dump and for quick unloading.

**Flinchbaugh Co.**

Circle No. 130 on Reader Service Card for more information

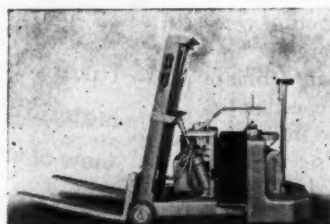
**A 5 hp 1200 rpm selective speed gearshift drive** has been added to the Lima-Hamilton line. The new unit has been built to individually motorize and drive machinery of various types that require a low range of selective operating speeds, combined with

radial load capacity. Called the R3AC, it is a compact combination of a 5 hp 1200 rpm integrally mounted electric motor on a polyphase, a-c power supplies of standard frequencies and voltages below 600.

**The Lima Electric Motor Co.**

Circle No. 131 on Reader Service Card for more information

**An 18 volt motor drive unit** is being used now on the heavy counterbalance trucks for ramp work that



The Moto-Truc Company makes. Under field tests, the 18 volt truck carried 2500 pound loads up 12° ramps for eight continuous hours without any trouble. Moto-truc engineers found out during the tests that their 18 volt model has up to 30% more power than 12 volt trucks with similar specs, according to the company. The 18 volt truck is available in 2000 and 2500 pound capacities. Lifting heights are 94" and 120" with corresponding collapsed mast heights of 72" and 83". Approximate chassis weight: 3000 pounds.

**The Moto-Truc Co.**

Circle No. 132 on Reader Service Card for more information

**A fast traverse, long lead screw** operated by a crank has taken the place of their hand lever adjustment on Metzgar Company's Flex-A-Switch. The screw operates a lever underneath the steel bed of the switch so that the rollers, mounted in individual frame sections, slide on the bed as a flexible unit to handle direction changes. All axles are concentric at any setting—no guard rails are needed except for very fast travel. Flex-A-Switch can be used with a raft of combinations of straight sections and 45° and 90° curves.

**Metzgar Co.**

Circle No. 133 on Reader Service Card for more information

**Making multiple labels** for shipment can take up a lot of valuable shipping room time—but it doesn't have to. Master Addresser Company has developed a slick time-saver called the Lab-L-Master for turning out multiple labels needed for shipments going out in several packages.



The Lab-L-Master is just pressed in place on a shipping order or bill before the consignee's name and address are filled in. Adhesive holds it in place. When the order is made out, the name and address is typed or written right on the Lab-L-Master. A carbon impression of the address appears on the order, while the Lab-L-Master is prepared simultaneously. In the shipping room, the Lab-L-Master is put in the printer and as many labels or tags as you need are run off. About 30 a minute is the average rate. Up to 200 labels can be printed from one master.

Master Addresser Co.

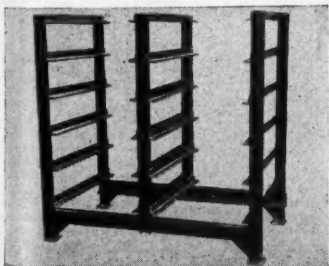
Circle No. 134 on Reader Service Card for more information

**Hot materials**, up to 600°F, can be conveyed on a new type belting called Super-Insulated Sahara. Imperial Belting Company makes the heat-resistant belt of heavy silver duck combined with asbestos and special insulating materials. It has been successfully used in handling various hot materials, including red hot castings and foundry shake-out sand.

Imperial Belting Co.

Circle No. 135 on Reader Service Card for more information

**Handling cement blocks** has been made easy by a new special rack Equipment Manufacturing Company makes. The rack is welded structural steel, holds a dozen steel or wood pallets of the size used for casting four blocks. Bottom level is raised from the floor enough to permit lifting and carrying by fork truck



or platform from casting or storage. Spacing of the levels permits free circulation of air for drying.

Equipment Manufacturing Co.

Circle No. 136 on Reader Service Card for more information

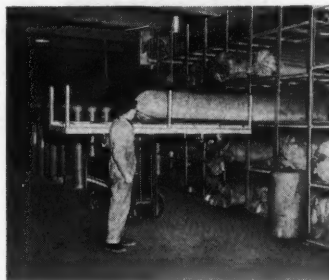
Restyled and improved, Towmotor Corporation's

Model W electric pallet truck is a compact, powerful, pallet-type truck built to handle pallet-loads weighing up to two tons. New features of the revamped truck: a contactor panel; positive-action brake with foolproof dead-man control; improved differential action; all rubber, dual trailer wheels for smoother operation.

Towmotor Corporation

Circle No. 137 on Reader Service Card for more information

**Handling and storing materials** in rolls has been made easy by Equipment Manufacturing, Inc.'s development of

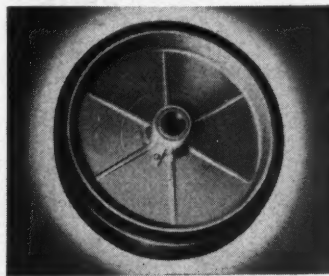


bed-type roller shelves. The new shelves permit carpet, rug and linoleum rolls (and any other kind of roll) to be rolled into slots from a specially designed dolly truck. Sheets of plywood are used as trays to support the bagged rolls. Slot openings are available in different sizes. Racks are prefabricated and shipped knocked-down. Upright T-shaped columns are punched with holes for positioning the shelves or tray units which are easily bolted in place.

Equipment Manufacturing, Inc.

Circle No. 138 on Reader Service Card for more information

**Smaller plants** can have the principal advantages of sealed-hum industrial wheels at a cost only a little higher than current prices on ordinary facilities. That's the boast made by Aerol Co., Inc., when it announced its new Airlite Seal wheel. Made of cast aluminum with a solid rubber tread, the new wheel winds up two years of researching, Aerol says. It is sealed from just about all foreign matter that causes excessive bearing and axle wear; should be particularly good for foundries, metal and woodworking shops, mills and warehouses. Available from 6" to 20" diameter.



Aerol Co., Inc.

Circle No. 139 on Reader Service Card for more information

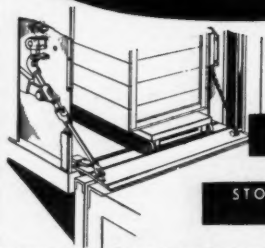
**Rolls of roofing paper**, drums and other smooth, cylindrical objects are easily handled with Speed Wheel lightweight gravity conveyors. Rolls and



Circle No. 48 on Reader Service Card for more information

## REDUCE OPERATING AND PRODUCTION COSTS WITH

### ALEXANDER ELEVATOR SILLS



SPEEDS MATERIAL HANDLING

CUTS TRUCKING HAZARDS

STOPS DAMAGE LOSSES

• Eliminate material handling delays, prevent elevator accidents, stop damage losses to merchandise and equipment with Alexander Safety Sills. Unique design permits bridging of wide gap-over door opening from elevator floor to building floor landings. Each sill compensates for differences in floor levels and provides easy, safe and smooth trucking surface.

Write today for catalog F for detailed information.

### ALEXANDER SILL COMPANY

manufacturers of patented  
SAFETY FREIGHT ELEVATOR TRUCKING SILLS  
AUTOMATIC ELEVATOR DOOR TRUCKING SILLS  
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## SAFETY IS CHEAP!

### PROTECT WORKMEN from open conductor bars



Workmen cannot touch

conductor bars on cranes or monorails when bars are enclosed in CON-L-DUIT, a specially compounded neoprene-base insulation. CON-L-DUIT leaves no gaps or openings for fingers or bars to enter. CON-L-DUIT provides complete protection on curves, straight runs, switches, interlocks and drop sections. It is inexpensive and easy to install. Made in sizes to fit all new or existing figure-8 conductor bar systems, CON-L-DUIT surpasses State Safety Codes. Dealers everywhere.

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### CON-L-DUIT

APPROVED SAFETY ENCLOSURE

CALABAR CORP.

South Gate, California

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drums move along the straight run of this conveyor without any guard rails. Speedways Conveyors, Inc. developed the SpeedWheel; it is available in 12", 15" and 18" widths with any wheel or roller spacing you need. 5' and 10' straight lengths and 45° and 90° curves are available, too. Even the 10' sections are easily portable.

Speedways Conveyors, Inc.

Circle No. 140 on Reader Service Card for more information

An ingenious new spring-steel shelf support, tagged Uni-clip, has been designed by Unistrut Products Company for use with its standard Unistrut channel. Uni-clips snap in or out of vertical channel members in a jiffy to meet your changing shelving needs. Adjustments can be made to the smallest fraction of an inch. Wood shelves can be supported without cross bars, using Uni-clip.

Unistrut Products Co.

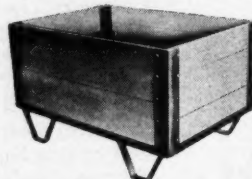
Circle No. 141 on Reader Service Card for more information

Better design and wider choice of running gear to handle different load and floor conditions are new features of the Wheel-Ezy stock truck being marketed by the Rapids-Standards Company, Inc. The Wheel-Ezy handles cases, sacks and cartons from storage or delivery trucks to your shelves. There are four

## In production or in storage IRONBOUND EQUIPMENT HANDLES SMALL PARTS MORE EFFICIENTLY



Standard 2-way entry bolted type skid built to handle loads up to 5 tons.



Standard box top welded to standard skid. Available too, with removable boxes. Handles many items in production and storage.



Flexible arrangement of boxes and skids permits tiering and stacking to meet your individual requirements. Provides quick availability, easy handling, or storage for complete units or parts.

Each of the units illustrated has an important use in modern industry. Ironbound skid platforms and box tops are prime sources of increased plant capacity so vitally needed today. Our representative can help you to increase your output and plant space. Catalog GP-7 may help you, too!



### IRONBOUND

BOX & LUMBER COMPANY

Materials Handling Division

30 HOFFMAN PLACE • HILLSIDE, N. J.

MANUFACTURERS OF QUALITY BUILT SKIDS, SEMI-LIVE SKIDS, FLOOR TRUCKS, ROLL TRUCKS, DOLLIES AND PRY BARS

Circle No. 50 on Reader Service Card for more information

models; each has a rigid 20 x 39-inch one-piece welded steel deck. All four models can be bought with 4, 5 or 6-inch wheels in steel, rubber or Durastan plastic. The Wheel-Ezy takes on loads up to half a ton.

The Rapids-Standards Co., Inc.

Circle No. 142 on Reader Service Card for more information

More than 3½ years of research and development went into the new Dillon Weight Indicator, according to W. C. Dillon & Company, Inc. Called the Dillon Industrial Scale when it came out three years ago, it has been revamped and improved.



The dial diameter has been increased to 16" for closer readings. Pivots and bearings are made of highly polished, hardened tool steel. Full compensation for tare loads has been provided, and a 360° ball-bearing swivel hook is now standard. The Weight Indicator weighs steel, wire, lumber, cement, scrap, drums, crates and a long list of other items. Dillon figures it is especially handy when long or bulky objects cannot be easily moved to a central weighing point.

W. C. Dillon & Co., Inc.

Circle No. 143 on Reader Service Card for more information

Resurfacing your floors without interrupting work schedules can mean a lot on the production records. Monroe Company has developed a plasticized flooring material which lets you do just that. The new material gives you a hard, smooth surface; it can be applied right over wood or concrete without metal lath or roughening concrete. Application is simple: just prime the floor, spread the ready-mixed material and pack it with a tamp, a roller or a truck.

Monroe Co.

Circle No. 144 on Reader Service Card for more information

New models of Diesel-electric cranes made by American Hoist and Derrick Company are equipped with a dome section of green plexiglas in the front quarter of the cab roof. The transparent plastic gives the operator full visibility upward as well as in front and on the sides. Same time, it filters the glare out of any sunshine hitting the dome. Roof sections are formed from single sheets of green transparent plexiglas, ¼-inch thick. Lugs cemented on the inside of the roof make it easy to clamp the formed sections to the cab.

American Hoist & Derrick Co.

Circle No. 145 on Reader Service Card for more information

Circle No. 51 on Reader Service Card for more information

when you think of efficient conveying systems

for peace

or

defense

THE NAME TO REMEMBER IS



the original

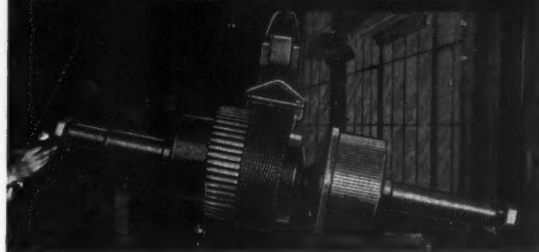
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Since 1901

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LIFT LOADS EASIER



GRIPPER SLINGS PROVIDE GREATER GRIPPING POWER, GREATER BEARING SURFACE, GREATER SAFETY!

You can lift any load . . . heavy or light . . . with ease and safety when you use a Cambridge Gripper woven wire sling.

You get greater gripping power because the sling flexes across its width rather than along its length.

You get greater bearing surface because the sling is broad and flat, not a long thin strand or series of links.

You get greater safety because the body of the sling will not snap suddenly. When one wire breaks it is immediately visible and the sling can be used even after several wires are broken.

SEE YOUR DISTRIBUTOR TODAY or write direct for technical data folder. Cambridge Gripper slings are sold through industrial supply, materials handling and safety equipment distributors.



The Cambridge Wire Cloth Co.

WIRE CLOTH METAL CONVEYOR BELTS SPECIAL METAL FABRICATIONS

Department W

Cambridge 3, Md.

DISTRIBUTORS—ask about valuable territories still open  
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Circle No. 53 on Reader Service Card for more information



## OLSON CONVEYORS

### No. 2080 Portable Slat Conveyor

For loading and unloading heavy boxes, parts, etc. Mounted on heavy duty casters. Hydraulic height adjustment on upper end. Write for Bulletin 2080.

### FOR EVERY PURPOSE

Apron, Belt, Chain, Roller, Pusher Bar, Slat, Spiral, Trolley and Wheel Conveyors . . . Potable and Stationary . . .

Single units and complete systems for continuous assembly operations, material movement, etc. Engineering, design and manufacture based on 50 years of practical experience. Send for free CATALOG.

### Conveyors by OLSON

For Every Purpose

### SAMUEL OLSON MFG. CO., INC.

2426 Bloomingdale Ave. Chicago 47, Ill.

Send FREE CATALOG showing OLSON Conveyor Systems at work.

Individual

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Street

City

Zone

State

Save time! Prevent accidents!

## LIFT AND DUMP MECHANICALLY

BAGS  
BARRELS  
DRUMS  
BOXES

**REDUCE HANDLING COSTS** with a CESCO Dumper. It handles up to 100 loads per hour; has a lifting cap. ranging from 100 to 1500 lbs. Both single- and multi-purpose portable models are built in standard dumping heights from 5 to 12 ft. Stationary models up to 16 ft. dumping heights. Push button controlled. Write for catalog.

**COLSON EQUIPMENT & SUPPLY CO.**  
1317 Willow Street • Los Angeles 13, California

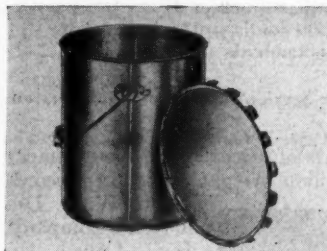


WRITE  
FOR  
CATALOG

**CESCO SKIP HOIST DUMPER**

Circle No. 54 on Reader Service Card for more information

**Short on containers?** A new type container, frankly described by its manufacturer as "an emergency and substitute solution to the current container shortage problem", has been developed by Vulcan Tin Can Company. Made in 1 to 5 gallon capacities, the new container has a tin plate body with soldered locked seams; covers and bottoms are either tinplate or clear lacquered black plate. Lug covers are fitted with either tubular or flowed-in gaskets. This type of container was used a lot during World War II's container shortage—Vulcan says it is perfectly satisfactory for heavy and semi-solidified stuff, but don't use it for thin liquids.



Vulcan Tin Can Co.

Circle No. 146 on Reader Service Card for more information

**Ashes to zinc ore** is the range of application for Link-Belt Company's CA concentric-action vibrating screens. Built for medium and heavy duty service, the screens size and rinse just about every material you have to handle.

Link-Belt Company

Circle No. 147 on Reader Service Card for more information

## Modernize with MARIETTA and solve storage problems

Store bulk materials the modern way. MARIETTA storage silos and bins keep valuable contents dry and safe. Each MARIETTA system is individually designed to fulfill your particular industrial storage and material handling requirement.

They are air-tight and their Aglite staves—the modern successor to sand and gravel concrete—give three times the strength of single wall construction. In them, bulk materials like chemicals, fertilizers, grains, sawdust, wood chips, coal, sand and gravel can be safely stored at low cost.

**FAST ERECTION**—Trained erection crews do the entire job in record time without disrupting regular operations.

WRITE FOR FULL INFORMATION

### The MARIETTA Concrete Corp.

Marietta, Ohio, Dept. 10

Baltimore, Md.

Charlotte, N. C.

Circle No. 55 on Reader Service Card for more information



A portable lift truck called the Hydratruck is now being marketed by Ginsberg Machine Company. Made in England, the truck carries a top load of 1120 lbs., has a lifting range from 7 inches to 5 feet. It has a 6 degree downward tilt and a 3 degree upward tilt.

Ginsberg Machine Co.

Circle No. 148 on Reader Service Card for more information

Vibratory parts feeders made by Syntron Company are adaptable to the handling of all kinds of parts, from tiny rivets to mower blades. Feeding capacity of the units can be doubled or tripled by equipping them with two or three feeding tracks instead of the single one they are furnished with. Movement of parts is in the same direction on all tracks and the



discharges may be located at one point or at different points around the circumference of the bowl, handy to processing stations.

Syntron Co.

Circle No. 149 on Reader Service Card for more information

**STACK to the CEILING!**

with  
**MULTI-STAK**  
(Patent Pending)

**Pallet Stacker Unit**

NOW—valuable storage space utilized to ceiling with Multi-Stak pallet stacker. Safely tier crushable, irregular, mixed loads, or hard to stock material. No weight ever rests on the merchandise!

UNIT CAPACITY 4,000 lbs.  
STACKED STATIC CAPACITY 20,000 lbs.

CARRIED AND TIERED BY FORK TRUCK

FOLDS FOR STORAGE  
Supporting standards set up and locked quickly by one man.

A TYPE and SIZE for EVERY USE... Write for Survey Sheet

**ELIZABETH IRON WORKS, Inc.**  
Materials Handling Specialists, Steel Fabricators SINCE 1907  
510 Green Lane, Elizabeth, N. J.

Circle No. 56 on Reader Service Card for more information

FLOW • MARCH, 1951

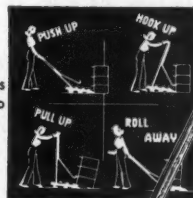
Circle No. 57 on Reader Service Card for more information



### "GEORGE" PASSES THE NOES TEST\*

With "George," the almost automatic TOTE BOX TRUCK, there are several very important noes... NO lifting strains... NO employee casualties... NO effort in hauling heavy tote boxes. Hook engages box handle, forward motion of truck handle glides load smoothly over bevel edge onto upper truck rollers. Lower rollers move truck to destination. Apply the "yes test" to your toting and you'll "buy George." You can use many of them. Send for Bulletin.

\*With apologies to you-know-who

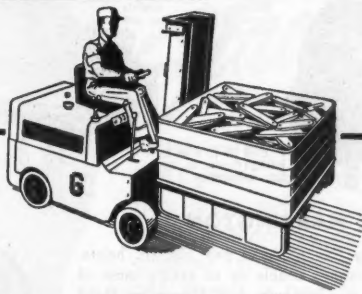


LET "George" DO IT

Write for free Folder L  
ROLOCK Incorporated  
Fairfield, Connecticut



## 'HEAVY LOADS roll easily on "FLINTZ" resurfacing



**HARDEST SURFACER KNOWN.** Dura-Tred "Flintz" over old, worn concrete or wood floors gives safer, faster and more efficient rolling of traffic. Spread it on, and let the traffic roll. Soon your Dura-Tred "Flintz" surface packs so hard and smooth that one man can handle heavy loads, the low traction permitting easily controlled drift after pull has stopped.

**ECONOMICAL AND LASTING.** Dura-Tred "Flintz" can be applied by ordinary labor, spread on entire floor or platform, used to patch bad spots only, or to provide a traffic aisle across a floor. This surface will take all the weight the under-flooring will hold and last for years under constant use, inside or outside. We'll be glad to refer you to Dura-Tred resurfacings that have withstood hard traffic for five and more years.

Tell us your floor surface problem — there is a Dura-Tred resurface to handle it economically and efficiently.

**DURA-TRED COMPANY**

For Better Factory Floor Conditions  
351 N. Central Park Blvd.

Chicago 24, Ill.

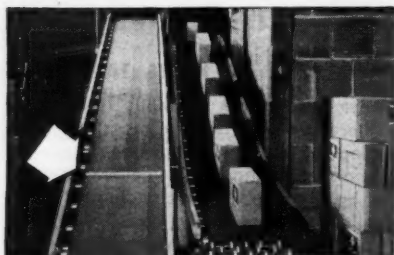
Circle No. 58 on Reader Service Card for more information

Circle No. 59 on Reader Service Card for more information

# ALLIGATOR



## CONVEYOR BELT LACING



Every  
Tooth  
A Vise\*

**in Long Continuous Lengths  
for Conveyor Belts . . . . .**

- ★ Excellent for Package Conveyors, Portable Loaders, Trenching and Ditching Machines, etc.
- ★ In canneries where corrosion or rust is a problem specify Alligator made of Monel.
- ★ For magnetic separators or anti-sparking specify Alligator made of Everdur.
- ★ Separable and smooth on both sides.
- ★ 12 sizes. For belts from 1/16" to 5/8" thick—and any width.

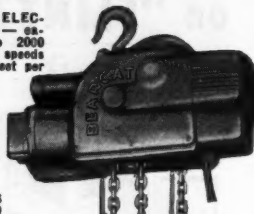
**Order from Your Supply House. Ask for Bulletin A-60.  
FLEXIBLE STEEL LACING CO. 4702 Lexington St., Chicago 44, Ill.**

**JUST A HAMMER TO APPLY IT**

## ... TO HANDLE MOST HOISTING REQUIREMENTS



"BEARCAT" ELEC-  
TRIC HOISTS — ca-  
pacities 170 to 2000  
pounds . . . speeds  
from 12 to 50 feet per  
minute.



PEERLESS  
HOISTS—1/2 to 60  
ton capacities.

### ASK FOR HARRINGTON

Our complete line of hand and electric hoists, trolleys and cranes enable us to satisfy most of your hoisting requirements. And, Harrington Hoist Products are backed by more than 75 years' experience in the design and manufacture of materials handling equipment. Let us tell you about our complete line, write for your copy of our Condensed Catalog.

**TROLLEY HOISTS**—for close head room.

**DIFFERENTIAL HOISTS**—1/4 to 1 1/2 ton capacities.

**"CUMALONG" LEVER PULLERS**—3/4 and 1 1/2 ton capacities.

**TROLLEYS**—FOR 1 BEAM.

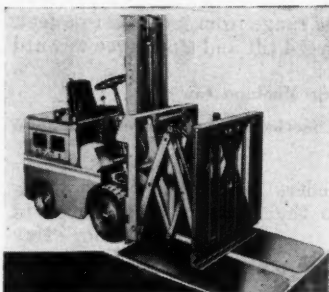
**THE HARRINGTON COMPANY**  
17TH AND CALLOWHILL STREETS  
PHILADELPHIA 30, PA.



PEERLESS  
"PACKET"  
SPUR GEARED  
HOIST — 1/2, 1  
and 2 ton ca-  
pacities.

Circle No. 60 on Reader Service Card for more information

**Handling unit loads without using conventional pallets is the job Clark Equipment Company built its**



**Pul-Pac truck for.** Clark's latest model Pul-Pak (first one came out in 1947) has pantograph-type linkage to actuate the gripper-jaw and pusher rack, in place of the long piston used on earlier models. The new construction allows a shorter hydraulic stroke from a more powerful piston; it gives the driver more visibility by getting rid of all Pul-Pac structure back of the uprights. There are no restrictions on tilt of the uprights on the new model. Rack and gripper-jaw can be lowered slightly when fully extended to engage and grip carrying sheets flat on the floor.

**Clark Equipment Co.**

Circle No. 150 on Reader Service Card for more information

**A downward tilt of 25° can be built into the face of the hydraulic crane scale you buy from Hydroway Scales, Inc., if you want it.** Tilting the dial makes it easier to read above eye level; Hydroway says it can put the tilt in your scale without taking up any more headroom than regular models or interfering with the swivel of either eye or hook. Available for all Hydroscale models up to 100,000 pounds capacity.

**Hydroway Scales, Inc.**

Circle No. 151 on Reader Service Card for more information

**A Pail Printer used for printing around the circumference of two, three or five gallon pails has been**

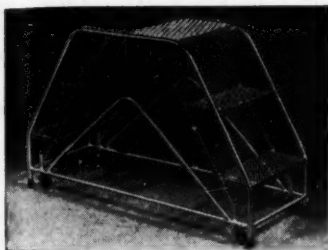


**developed by Industrial Marking Equipment Company.** The pail you want to mark is put on an expanding mandrel; when one revolution is tripped, a rubber die prints your identification or message on the container. Ink is applied to the die by an ink reservoir and a series of distributing rollers. Pails can be printed as fast as your operator can load and unload the mandrel.

**Industrial Marking Equipment Co.**

Circle No. 152 on Reader Service Card for more information

In busy, crowded aisles the new Ballymore ladder should be a handy thing to have. Steps on both ends allow two men to use it at one time on large assembly jobs and in stock room aisles. When no one is on the ladder it rolls on swivel casters. But the weight of a man pushes the spring-mounted casters aside while rubber-tipped legs grab the floor to keep the ladder from rolling. Frame of the Ballymore is welded tubular steel. Steps are made of expanded steel.



Ballymore Co.

Circle No. 153 on Reader Service Card for more information

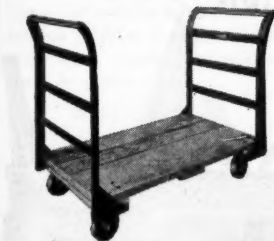
Easy handling and extra utility are the two big selling points Baker-Raulang Company makes about its new line of Type FC center-control fork trucks. Designed to handle 3000 to 6000 pounds, the new trucks have been built with an eye to ruggedness and easy maintenance. Same time, steering and visibility were improved to make operating the trucks easier on drivers. One pedal controls power and braking. Hoist, tilt, direction of travel and acceler-

## You can provide easy mobility to a variety of industrial products with **IRONBOUND ALL-PURPOSE HANDLING UNITS . . .**

POPULAR IRONBOUND

**FLO TRUK**

• An easy to handle ruggedly constructed unit for carrying bulky and heavy loads at lowest cost. Seven standard sizes with one or two push handles makes it easy to select the proper truck for your requirements. Ask an Ironbound engineer for suggestions.



**The HANDY**  
for furniture and similar items.



**The HAULER**  
for cases, crates, tote boxes, etc.



**The HUSKY**  
for general use throughout the plant.

### THE IRONBOUND "SAFETY-SKID" WITH ROUND CORNERS

Ironbound construction assures long hard use with complete safety to product and operator. Still the time proven method for handling of materials efficiently and economically.



**IRONBOUND**

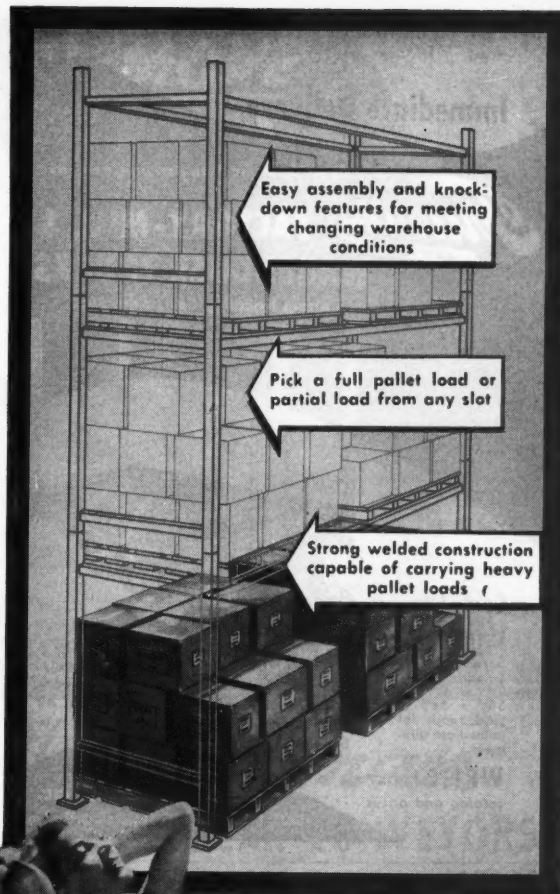
BOX & LUMBER COMPANY  
Materials Handling Division

30 HOFFMAN PLACE • HILLSIDE, N. J.

MANUFACTURERS OF QUALITY BUILT SKIDS, SEMI-LIVE SKIDS, FLOOR TRUCKS, ROLL TRUCKS, DOLLIES AND PRY BARS

Circle No. 61 on Reader Service Card for more information

FLOW • MARCH, 1951



Easy assembly and knock-down features for meeting changing warehouse conditions

Pick a full pallet load or partial load from any slot

Strong welded construction capable of carrying heavy pallet loads



# Well Stacked!

Prefabricated pallet racks by E.M.I. permit stacking to conserve floor space without tying up low level material. They are engineered for strength and safety and there's a type to suit your particular needs.



Write for our catalog. It illustrates all types.

# EQUIPMENT MFG. INC.

21552 HOOVER ROAD

DETROIT 5, MICHIGAN

Circle No. 62 on Reader Service Card for more information



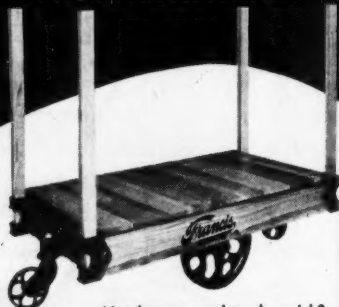
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## Immediate Delivery

Buy Direct from the Manufacturer and Save

# Francis FACTORY-MILL & WAREHOUSE TRUCKS

Cutting Handling Costs since 1880



## Complete Line —

For every use. Standard sizes 27" x 48" and 30" x 54" in stock ready for immediate shipment.

Need more good trucks quick? Buy direct from the manufacturer and save — time AND money. Francis heavy duty, economical trucks feature strong iron work — hardwood frame—rigid construction. All carefully machine fitted. Steel rims or rubber tires.

**WRITE TODAY** for catalog and prices

Manufactured by  
**HOOSIER FENCE CO. Inc.**

DEPT. F 1701 E. 38th St., Indianapolis, Ind.

## Here's a better way to Mark Parts — in Colors!

Whether it be marking for dimensions, inspection, stocking or assembly identification, you'll find the Flo-master does a better job in less time. Its felt tip glides over any surface—metal, plastic, wood, etc. with broad bold lines or fine lines.

Flo-master semi-opaque inks—waterproof, non-smudging, fast-drying—come in a wide range of colors.

For light colored surfaces, use Transparent Inks with "POCKET SIZE" Flo-master. For dark, hard-to-mark surfaces, use Semi-opaque Inks with the "KING SIZE" Flo-master.

Adopt Flo-master Color Marking and see the difference!

Ask your supplier or write to Cushman & Denison Mfg. Co., 153 West 23rd Street, New York 11, N. Y.



Cap of "King Size" may be screwed to bench to serve as stand.

# Flo-master

FOUNTNBURSH

KING SIZE

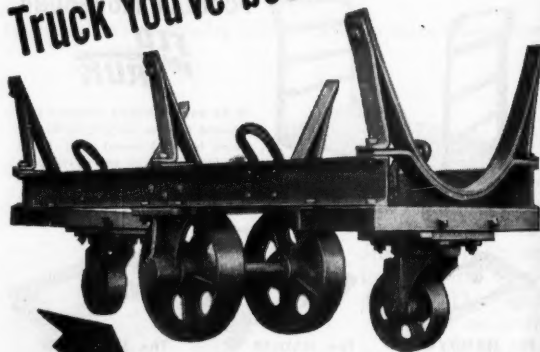
8 3/4 in.

POCKET SIZE

6 1/2 in.

6 1/2 in.

## The Really Rugged Bar Iron Truck You've been waiting for!



# LANSING COMPANY

TRUCKS · BARROWS · CARTS  
TRAILERS · CASTERS · SKIDS

"Keep Your Products on Wheels"  
Main Office and Factory: LANSING, MICH.

Circle No. 65 on Reader Service Card for more information

MARCH, 1951 • FLOW

ation are controlled from a panel at the driver's right hand. Baker figures a brake relining job on one of the new trucks should take just half an hour; removing the power axle is a one-hour job.

The Baker-Raulang Company

Circle No. 154 on Reader Service Card for more information

The good old Jeep keeps popping up all over industry. Ever since the end of World War II, when it was made available to civilians,



the rugged quarter-ton truck has been used by plants for everything from a snow-plow to a personnel carrier. Larger plants have used Jeeps for messengers—some of them take visitors through the place in a company Jeep. Willys-Overland Motors, Inc., makers of the vehicle, recommend it for any job you have that calls for a small, highly maneuverable truck that can stand up under rough treatment.

Willys-Overland Motors, Inc.

Circle No. 155 on Reader Service Card for more information

Circle No. 64 on Reader Service Card for more information

A canvas-filled, macerated phenolic and resin compound is used to make the Marvatex wheel. Marvatex won't mar or scratch surfaces that have to be kept good-looking; it is a natural for terrazo, marble or asphalt tile.

The Haas Corp.

Circle No. 156 on Reader Service Card for more information

Two important changes have been made in the new heavy duty hammer tacker, reworked by Fastener Corporation from a standard model. First, a snap-off jaw has been provided to make cleaning fast and easy. Second, a constantly-engaged plunger and cam mechanism has been designed which gives greater driving power. You need the extra power when you're working with the  $\frac{3}{8}$ ",  $\frac{1}{2}$ " and  $\frac{9}{16}$ " staples used in the machine.

Fastener Corp.

Circle No. 157 on Reader Service Card for more information

Load handling capacity of the Metzgar Company's Save-A-Hoist has been hiked more than one-fourth by the addition of bridge type under-bracing. The Save-A-Hoist is a gravity-operated loading ramp used as standard equipment in truck handling medium-heavy jobs. A length of 10 feet, equipped with grab hooks, is available in the wheel type in widths of  $11\frac{1}{2}$  inches; 10 wheels per foot.

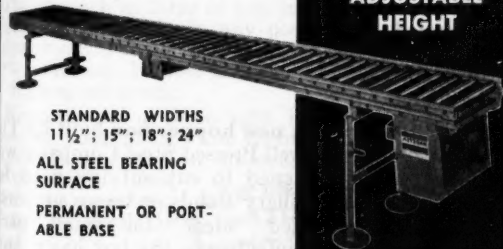
Metzgar Company

Circle No. 158 on Reader Service Card for more information

## KEEP THINGS MOVING with a

Handles the jobs that are too "tough" for powered belt units. Undamaged by sharp corners or rough edged work. Supplies dependable power in gravity lines.

Work can be slowed or held without stopping conveyor



STANDARD WIDTHS  
 $11\frac{1}{2}$ " ; 15" ; 18" ; 24"

ALL STEEL BEARING  
SURFACE

PERMANENT OR PORT-  
ABLE BASE

## METZGAR

"LIVE ROLLER"

## POWER UNIT

## 4 STANDARD SIZES

ADJUSTABLE  
HEIGHT

For Full Specifications and  
Price Write for Folder No. 1249



## METZGAR CO.

423 Douglas, N.W.

GRAND RAPIDS 4, MICH.

Circle No. 66 on Reader Service Card for more information

FLOW • MARCH, 1951

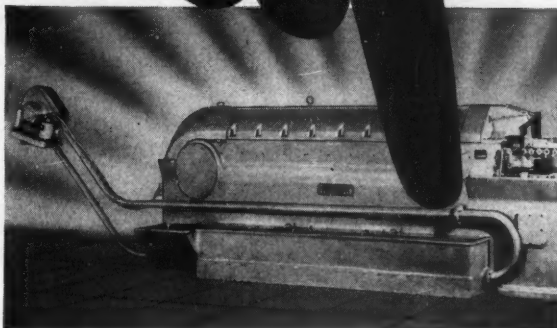
# REMOVE CHIPS...

## THE Hapman WAY

★ AUTOMATIC

★ ECONOMICAL

★ CLEANER



## Hapman

## TUBULAR CONVEYORS

WILL HANDLE CHIPS • SLUDGE  
WELDING FLUX • DUST

Any flowable material—from abrasive dusts to food materials—can be handled with maximum efficiency in a Hapman tubular, rubber flight, sealed pin conveyor. One of the many applications where Hapman Conveyors are doing a better job of waste removal is the illustration above—as an integral part of a Footburt horizontal broach, chips are removed continuously.

Hapman Conveyors operate in any plane and at any angle, and require a minimum of clearance and support. Exclusive Hapman construction features assure long life, low maintenance and low operating cost.

A Hapman job-engineered Conveyor system will solve almost any flowable material handling problem. Write today for catalog showing details of construction and applications.



## Hapman CONVEYORS, INC.

DIVISION HAPMAN-DUTTON COMPANY

KALAMAZOO MICHIGAN

Circle No. 67 on Reader Service Card for more information

# BATTERY ELECTRIC TRUCKS

helped us *increase production* **55%**



(Based on an actual case history)

We make paints and varnishes down at our plant. Business was so good we couldn't keep up with the demand! So, after looking around for a solution, we installed a battery-electric truck-and-pallet system of material handling. Here's what happened:

**1. FASTER OPERATIONS**—Loading and unloading of rail and highway shipments became easier and speedier. Man hour requirements were lowered substantially.

**2. STORAGE SPACE FULLY UTILIZED**—By tiering unit loads, we made full use of vertical storage space and consolidated all warehouse operations under one roof.

**3. INVENTORY TIME REDUCED 91%**—Formerly it took four men three days to take inventory. Now two men can do it in one day.

**4. EASIER WORK FOR EMPLOYEES**—Battery-electric trucks took away

the drudgery of material handling. Employees were happier, and many men were released to production lines, thus enabling us to take on additional work from some of our other overloaded plants.

**5. SAFER, CLEANER OPERATIONS**—Battery-electric industrial trucks are fume-free, virtually fire-proof, clean, quiet and easy to handle.

**6. LOW-COST OPERATION**—Maintenance costs have been very low. This means dependable operations . . . negligible truck down-time.

**RESULT**—When we were handling manually, we were hard pressed to ship as much as 800,000 pounds per week. Now with the help of battery-powered fork trucks and pallets, we ship between 1,250,000 and 1,500,000 pounds per week and think nothing of it. Roughly, we've increased production about 55%!

Records like these can be yours, too, with a proper system of material handling. You can find out *how* from our "Handbook of Material Handling with Industrial Trucks." Any company official may obtain a free copy by writing us on company stationery.



THE *Electric* INDUSTRIAL TRUCK ASSOCIATION  
3701-C NORTH BROAD STREET - PHILADELPHIA 40, PENNA

Circle No. 68 on Reader Service Card for more information

Because its construction uses a standard, electric hoist mechanism powered by a rotary, vane type, air motor instead of the usual reciprocating, piston type the new



PT pneumatic hoist developed by Detroit Hoist & Machine Company is a little unusual. Made in lifting capacities of 250 pounds to one ton, the new hoist's air motor is a sliding vane, rotary type; no pistons or reciprocating parts are involved. A rotor and four sliding vanes which automatically take up their own wear provide pulseless operation and smooth riding of the load hook and load. The motor is compact, self-contained entirely closed. Hoist itself is a general purpose, air-powered equipment for handling practically anything.

Detroit Hoist & Machine Co.

Circle No. 159 on Reader Service Card

A new hopper box built by The Powell Pressed Steel Company was designed to cut out the need for auxiliary stands or frame supports. Called "ideal" for small parts manufacturers, the box has a hopper door that drops work at the right level for assemblers or machine operators. It is easily tiered for storage. Available in gravity feed or flat bottom styles, with two-way or four-way lift truck entries.

The Powell Pressed Steel Company

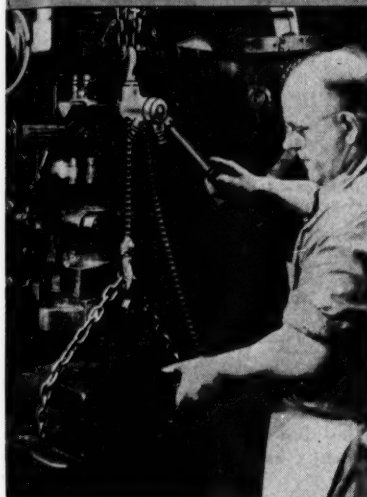
Circle No. 160 on Reader Service Card

"Hey Bill, a ham a skill impor work routi costly The C be car lbs. — 8½-in throug Lifts a holds Capac 50% o or hig Keep tools i elimin by pro sure li Write FL3MP See us BOOTH COR Quik-Lif Pull Ra Pullers Chain H Circle FLOW



## CALL FOR A MIDGET INSTEAD OF A MAN

Wherever, Whenever  
You Need A Lift



### COFFING MIGHTY-MIDGET PULLER...

Easily lifts and shifts heavy  
tool dies and castings, loads  
and unloads trucks, is  
equally efficient on  
horizontal as  
well as ver-  
tical pulls.

"Hey, Bill, give us a hand"... and a skilled man leaves important production work to struggle with some non-routine lifting job. This practice is costly, dangerous and unnecessary. The Coffing Mighty-Midget Puller can be carried anywhere—weighs only 6½ lbs.—hooked anywhere—needs only 8½-in. headroom—handles odd jobs throughout the plant quickly, safely. Lifts as much as three or four men... holds loads securely in any position. Capacity, 500 lbs.—factory-tested at 50% overload. Handle is either lever or high-speed crank.

Keep several of these light, handy tools in your plant. Let them help eliminate production interruptions by providing a safe, sure lift—anywhere. Write for Bulletin FL3MP

**LOW PRICE!**  
—\$21.75  
(1000-lb. Model  
Only \$31.00)

See us at  
BOOTHS 108-109, Materials Handling Show

**COFFING HOIST COMPANY**  
DANVILLE, ILLINOIS

Quik-Lift Electric Hoists • Hoist-Alls • Safety-Pull Ratchet Lever Hoists • Mighty-Midget Pullers • Spur-Geared Hoists • Differential Chain Hoists • Load Binders • I-Beam Trolleys.

Circle No. 77 on Reader Service Card

## In Materials-Handling the LIFT-JACK System

Lets **1** man do the work of **2**

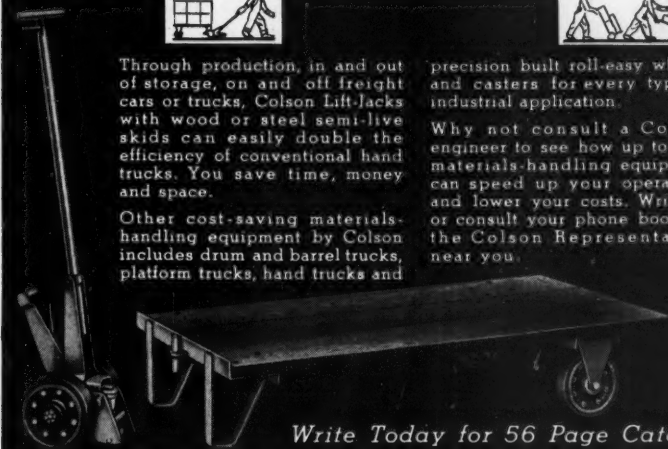


Through production, in and out of storage, on and off freight cars or trucks, Colson Lift-Jacks with wood or steel semi-live skids can easily double the efficiency of conventional hand trucks. You save time, money and space.

Other cost-saving materials-handling equipment by Colson includes drum and barrel trucks, platform trucks, hand trucks and

precision built roll-easy wheels and casters for every type of industrial application.

Why not consult a Colson engineer to see how up to date materials-handling equipment can speed up your operations and lower your costs. Write us or consult your phone book for the Colson Representative near you.



Write Today for 56 Page Catalog

**THE COLSON CORPORATION**

ELYRIA, OHIO

CASTERS

LIFT-JACK SYSTEMS

INDUSTRIAL TRUCKS

## STORE CRUSHABLE and ODD-SHAPE MATERIALS

with the

*Flexible* **PALTIER**

Self-Aligning Stacking Pallet



Palletizing EARTHEN CROCKS—a hard item to stack now done easily with the *Flexible* PALTIER.



RECEIVING CONE ASSEMBLY.

VERTICAL SUPPORT. Electrically welded mechanical steel tubing.

DIFFERENT LENGTHS OF VERTICAL SUPPORTS MAY BE USED WITH THE SAME PALLET FOR MORE FLEXIBLE AND EFFICIENT STORAGE.



END OF TUBE SWEDGED.

HEX LOCK NUT.

STEEL WASHER.

REINFORCING SLEEVE.



ALIGNMENT RING.

MALE CONE, WELDED TO SLEEVE.

**NOW practically ANYTHING  
can be palletized**

Write for illustrated descriptive booklet.



**THE PALTIER CORPORATION**

53 West Jackson Boulevard, Chicago 4, Illinois  
DISTRIBUTORS IN PRINCIPAL CITIES

Circle No. 71 on Reader Service Card for more information

## BREAK the BULK Material BOTTLENECK IN YOUR PLANT WITH



Handy,  
Efficient

**TOTE**  
SYSTEM

## The NEW Improved Method now revolutionizing BULK MATERIALS Handling in many industries

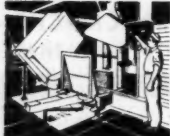
Modernizing methods for handling materials in bulk has become the watchword of progressive industries from coast to coast. For the first time in generations, TOTE SYSTEM\* provides a practical, efficient, economical answer to most, if not all, your bulk materials handling, shipping and storage problems.

Briefly, TOTE is a system for handling such bulk materials as flour, sugar, cement, carbon black, paint pigment, powdered milk, and other dry granular or powdered materials, in convenient, gleaming 74 cu. ft. aluminum containers known as "TOTE BINS". Filling and discharging equipment together with the bins, comprise the TOTE



System. Advantages gained: elimination of sources of contamination and deterioration; prevention of rodent and insect infestation; stopping of container

losses through breakage, spilling or sifting; elimination of disposable container expense; saving on damage claims, pilferage losses; retention of



original quality of product. These are but a few of the important advantages you will enjoy once TOTE SYSTEM\* goes to work for you.

Many industries throughout the nation are enthusiastic users of TOTE SYSTEM\*. Let us send you their comments based on actual experience. Write at once for this and other detailed, illustrated information.

\* Both TOTE and TOTE System Reg. U.S. Pat. Off.

TOTE SYSTEM, INC., Dept. B  
600 So. 7th Street, Beatrice, Nebraska

Without obligation, send me information on TOTE

Name \_\_\_\_\_

Firm \_\_\_\_\_

Address \_\_\_\_\_

City \_\_\_\_\_

State \_\_\_\_\_

Circle No. 72 on Reader Service Card

72

A new adhesive for case liners was developed recently by the Adhesives and Coatings division of Minnesota Mining and Manufacturing Company. The new adhesive meets all requirements of Spec. JAN-P-140, types I and II, grades A and B. It can be used for a wide variety of packaging jobs under that spec. Application is by brush, spray gun or roll coater.

Minnesota Mining and Manufacturing Co.

Circle No. 161 on Reader Service Card

Heavy-duty structural steel swivel and rigid casters in a wider range of wheel diameters are a recent addition to the line of industrial casters made by Bond Foundry & Machine Company. Series 40-A-MH "Swivel" and Series 41-A-MH "Rigid" casters, in 5", 6" 8" and 10" wheel diameters, are made of even thicknesses of heavy steel uniformly shaped to give extra strength and rigidity.

Bond Foundry & Machine Co.

Circle No. 162 on Reader Service Card

Neither brawn nor balancing skill is needed to handle heavy loads on the Melooz Defender, designed for women workers and unskilled men by Melooz Manufacturing Co., Inc. The load is overbalanced by foot-operated leverage, then fully supported by an adjustable tripod support and third wheel. Melooz says handling the Defender is as easy as pushing a baby carriage. The tripod support and third wheel can be folded out of the way for compact storage.

Melooz Mfg. Co., Inc.

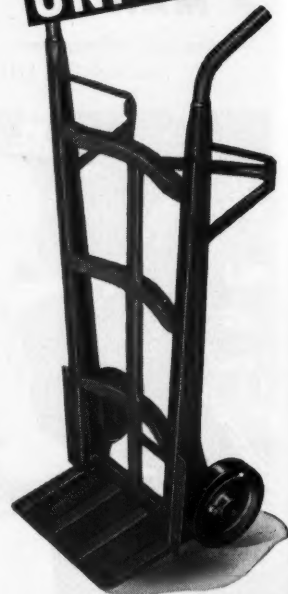
Circle No. 163 on Reader Service Card

A slick idea for bundling materials for storage has been worked out by American Chain Division of American Chain & Cable Co., Inc. It's the ACCO bundling chain with an automatic lock, which permits bundles to be stored indefinitely and held securely without the pins, pear shaped links and wires you usually need for binding the bundles. The lock is sold as a separate unit or as part of a chain assembly. Assemblies with the lock can be furnished with regular wrought iron, low carbon, hight or alloy chain.

American Chain & Cable Co., Inc.

Circle No. 164 on Reader Service Card

## HALLOWELL UNI-TRUK



## HEAVY-DUTY TRUCKS FOR TOUGH JOBS

Tough jobs are easy with these sturdy, 2-wheel HALLOWELL Trucks. All-welded, all-steel construction minimizes weight (heavier model #738 weighs only 50 lbs.), cuts maintenance costs, lengthens truck life. Ribbed, angle-form steel nose carries heavier pay loads without bending, reinforces "UNI-TRUK" at point of severest stress. Two popular models: #738 with 8" wheels and braced legs; #734 with 6" wheels, no legs.

Write for Bulletin 718-2.

**HALLOWELL**  
MATERIALS HANDLING EQUIPMENT

**-SPS-**

STANDARD PRESSED STEEL CO.

JENKINTOWN 49, PENNSYLVANIA

Circle No. 73 on Reader Service Card

MARCH, 1951 • FLOW

**Storing or repiling bulk materials** is speeded up by the S-A Swivel-Piler. Made by Stephens-Adamson Manufacturing Company, the Swivel-Piler throws grain, bulk chemicals, sand, coal and other granular or small lump materials to a height of 20 feet over a radius of 50 feet. It is easily pushed about and operated by one man. Also used for aerating and repiling.

Stephen-Adamson Manufacturing Co.

Circle No. 165 on Reader Service Card

**Self-rewinding tape rule** goes out 50 feet, comes back when you're ready to pocket it—without cranking or reeling. The full 50 feet come back into the measure's shell in 10 seconds. One hand keeps the unit under control.

Master Rule Mfg. Co., Inc.

Circle No. 166 on Reader Service Card

**Ear stopples** made by Sigma Sales Corporation keep out loud noises, let in conversational tones to keep workers happy in spite of banging presses.

Sigma Sales Corporation

Circle No. 167 on Reader Service Card

**CUT YOUR SWEEPING COSTS 75%...**

WITH **Wilshire**  
**POWER SWEEPER**



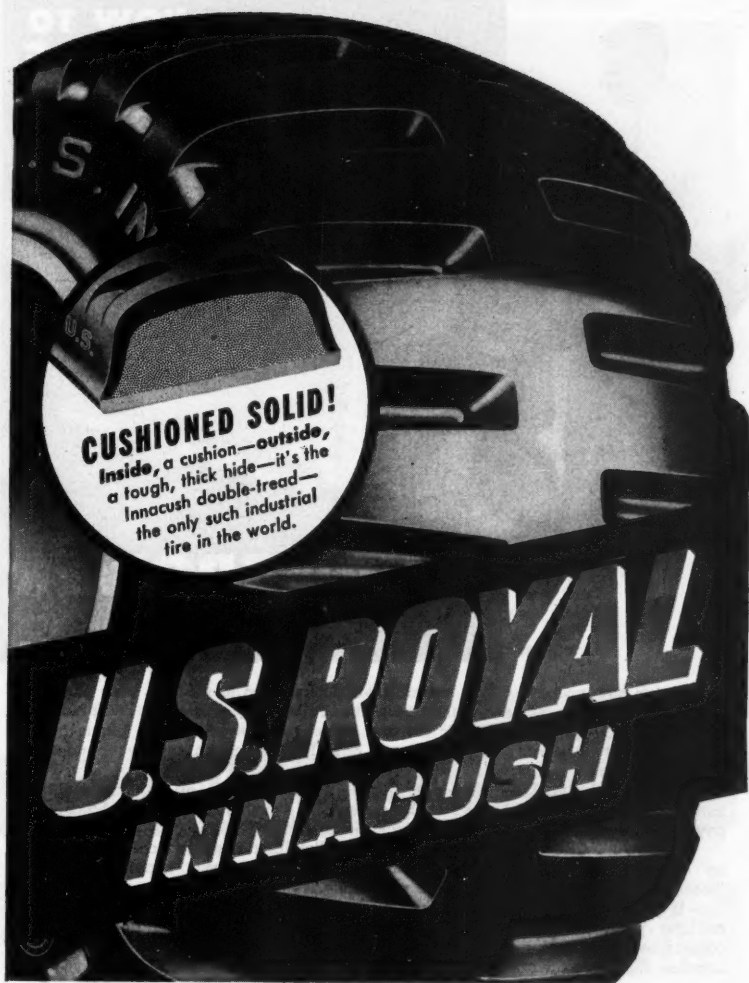
Picks up everything from cigarette butts to pop bottles in one easy operation! Write today for dealer nearest you and **FREE on-Your-Job DEMONSTRATION.**

For dealer nearest you, Write Dept. B-3

**Wilshire**  
POWER SWEEPER CO.  
126 W. Cherry Chase Drive  
Glendale 4, Calif.



Circle No. 74 on Reader Service Card



**CUSHIONED SOLID!**  
Inside, a cushion—outside,  
a tough, thick hide—it's the  
Innacush double-tread—  
the only such industrial  
tire in the world.

## Softer on the Inside... Tougher on the Outside

**"Solid" performance never possible before**

**ADDS HUNDREDS OF HOURS** to tire life—with 50% more rubber than conventional solids. Both inner and outer treads are compounded for maximum wear resistance.

**PROTECTS** driver and vehicle from riding shocks on rough floors, litter and debris.

**PROTECTS** against load shift and breakage—slashing repair and maintenance expense.

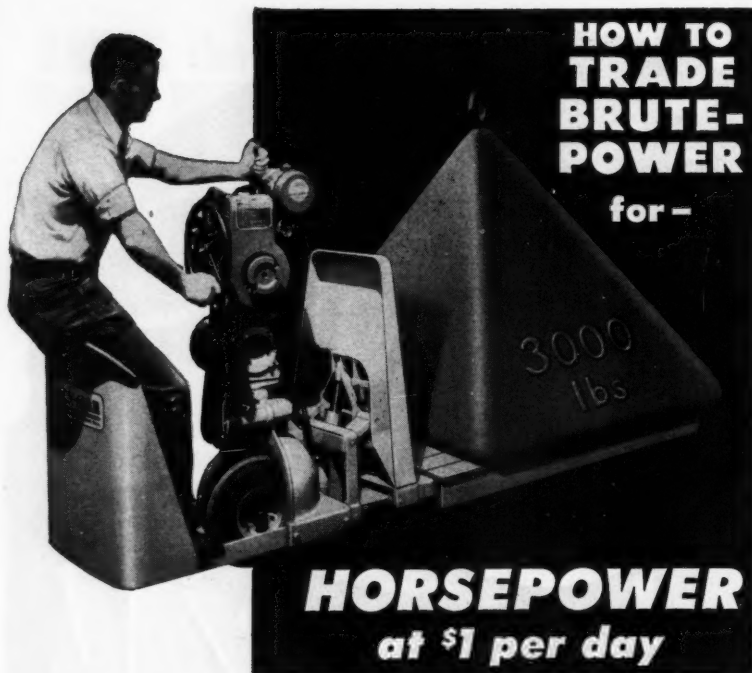
**The Great Soft Riding Solid—no ride shock—no load shock!**

Phone for your complete proof demonstration  
at your local U. S. Royal Distributor's now!

## UNITED STATES RUBBER COMPANY

Circle No. 75 on Reader Service Card for more information





**HOW TO  
TRADE  
BRUTE-  
POWER**

for -

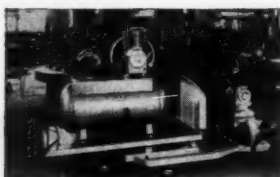
**HORSEPOWER**  
at \$1 per day

Here's how you can install modern lift-truck handling methods in your plant—and your fuel cost may be less than \$1 per 2-shift day. The versatile Truck-Man's rugged gasoline power, hydraulic lift and maneuverability fit it into plants and warehouses of all types and sizes. Here's how Truck-Man can save your money and manpower:

**IF YOU'RE SMALL**—Truck-Man Skid Lift, Pallet Toter or Platform Utility move loads now handled by two or three men with "push-pull" trucks or hand-led powered "jacks," limited to the pace of the operator.

**IF YOU'RE GROWING**—The Truck-Man Pallet Toter is economical for picking up distant palletized loads and laying 'em down for your heavier, costlier "stacker." Use Model D if you work with skids.

**IF YOU'RE BIG**—Plants covering acres use fleets of Truck-Man Pallet Toters as inter-plant "feeders"—increase the efficiency of their big fuel- and power-consuming stackers by restricting travel to small areas. The Skid Lift easily handles 3500 lb. skid and bin loads, loading directly on trucks and cars.



Model DT Platform Utility—2000 lb. Capacity



Model D Skid Lift—3500 lb. Capacity

#### TRUCK-MAN GIVES YOU—

- Low cost, easy maintenance, a minimum of fuel and labor
- Maneuverability in crowded aisles, 360° steering, 27" width
- Simple, sure handling with driver always facing load and his "spot"
- Pneumatic-tired drive wheels for fragile loads, wooden floors, reduced driver fatigue
- Dash pot throttle controls for soft starting; two speeds forward and reverse; speeds from a creep to 8 mph
- Efficient load to weight ratio of almost 4 to 1, easy on elevators, ramps, car and truck floors
- Rugged design — built for 'round-the-clock, man-saving work!

**NEW POWER  
NEW STEERING  
NEW TRANSMISSION**

*Send Coupon for Catalog*

**truck-man**

**Div. of The KNICKERBOCKER CO.**

582 LIBERTY ST. • JACKSON, MICH.

NAME \_\_\_\_\_ TITLE \_\_\_\_\_

ADDRESS \_\_\_\_\_

CITY \_\_\_\_\_ ZONE \_\_\_\_\_ STATE \_\_\_\_\_

Circle No. 76 on Reader Service Card for more information

**Screw conveyor box cover clamp** Screw Conveyor Corp. has perfected "U" Edging to fit over the cover and box flange; also, a clamp which snaps on about every five ft. to hold the cover and edging down tight. This is said to form a dust-tight seal and eliminate time spent removing hundreds of nuts and bolts when conveyor boxes were cleaned or fumigated. The "U" Edging is made to fit all screw conveyor boxes and so are the clamps. No tools are needed. Spring steel is used for the clamps and they retain their resiliency indefinitely, according to the release.

Circle No. 168 on Reader Service Card

**Drive wheels** for use on bucket elevators have been introduced by Beaumont Birch Co. These wheels are said to increase chain life, and insure against chain breakage due to overload. The wheels can be built to provide any desired amount of traction and can be used with practically all chains of standard construction. Designed with "corrugations" on the rim, the wheels are said not to jam and break the chain and will not slip when load conditions do not exceed the maximum specified by the manufacturer.

Circle No. 169 on Reader Service Card

**Heavy-duty bar trucks** of steel channel and I-beam construction have been developed by Palmer-Shile Co. They can be built to handle any load capacity. Units are tilt-type for handling of long stock, including tubing, and are of reinforced all-steel welded construction with four swivel casters at the ends.

Circle No. 170 on Reader Service Card

**Electric chain hoists**—An improved line of electric roller-chain hoists has been developed by the Whiting Corp. The redesigned units use a spring-set, shoe-type motor brake, in which the lining is bonded to the shoe. This is said to provide improved braking power and longer brake lift. The pull cord has been relocated at the center to eliminate any tendency of the hoist to tip when the control cord is pulled. In the two-ton hoists, a built-in hook provides 2½" reduction in headroom. The line includes ¼, ½, 1 and 2-ton capacity models.

Circle No. 171 on Reader Service Card

MARCH, 1951 • FLOW

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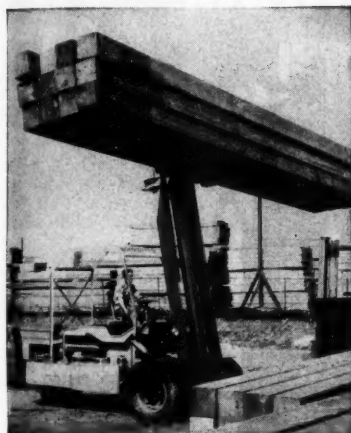
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FLOW

# HEAVY-DUTY FORK LIFTRUK Cuts the High Cost of Lifting!



**Silent Hoist LIFTRUK**  
available in 5, 7½, 10 ton  
capacities.

The heavy-duty "Silent Hoist" Fork LIFTRUK is engineered to reduce Materials Handling costs and operations!

More Lifting Power... more Carrying Power... means bigger loads, heavier loads and fewer trips.

Faster unloading, more efficient inter-plant handling and higher stacking, quicker unloading to Truck, Trailer or R.R. Car means a job well done and at savings very often up to 75%!

By Makers of **KRAWINKAR**

**NEW BULLETIN  
No. 77**

Write for facts regarding the Exclusive and Original Features that put Fork LIFTRUK in the lead for long service and lower maintenance costs.



**SILENT HOIST & CRANE CO.**  
Pioneers of Heavy Duty  
Materials Handling Equipment

888 63rd ST., BROOKLYN 20, N. Y.

Circle No. 77 on Reader Service Card  
FLOW • MARCH, 1951

Circle No. 78 on Reader Service Card for more information

*One  
man  
and*



## a C-F Lifter...

One man and a C-F Lifter handle the sheet steel stock in and out of storage in this plant with ease, speed and economy. C-F Lifters can pick up, carry and unload more loads per hour using less man and crane time than any other method. Note how closely a C-F Lifter piles sheets—this results in great savings in storage space. Jaw adjustments for carrying different widths of sheets are made in a few seconds by the operator—an important feature when varying sizes of stock are used.

C-F Lifters are made in sizes to handle from 2 to 60 tons in standard and semi-special designs.

Write for the bulletin "C-F Lifters." It illustrates the many cost saving advantages of these lifters.

**CULLEN-FRIESTEDT CO.**  
1320 S. Kilbourn Ave., Chicago 23, Ill.



# Save with a BANTAM® loads materials... digs holes... cuts trenches!

Truck-mounted BANTAM runs anywhere around yard, plant, or cross country... cuts costs at every turn!

Why pay \$12,000 to \$18,000 for BIG slow-moving equipment, when the majority of your digging and handling jobs can now be done faster, more economically with a low-cost Bantam. Simple, mobile, rugged, Bantam is ideal for loading trucks, cars or hoppers... speeds handling of bulk materials and finished products... saves time digging trenches, foundations, etc. Job-proved (nearly 2000 Bantams in use)... nation-wide distributor service. Write today for free literature. Schield Bantam Co., 251 Park St., Waverly, Iowa.



**SCHIELD  
BANTAM**

CRANES • EXCAVATORS



only  
**\$6080 00\***  
(clam, less truck)  
F.O.B. Waverly, Iowa

\* Low-mileage 6 x 6 trucks available through factory at reasonable cost. All prices subject to change without notice.

**CRANE**  
Lifts up to 10,000 lbs.



**TRENCH HOE**  
Digs 100' of 5' trench per hr.



**DRAGLINE**  
Moves up to 70 yds. per hour.



**Costs less... travels 35 m.p.h.... gets more jobs done**

Circle No. 79 on Reader Service Card for more information

# WOULD YOU LIKE TO BUY A "SELF-HEALING" BAG CLOSER?

Would you like to have a Bag Closing Machine that never got out of order? ... never broke down? ... that would automatically "heal itself" if any parts began to wear?

Of course you would. A wear-immune and failure-proof machine is the ideal. We never quite achieve it — *but we can come mighty close!*

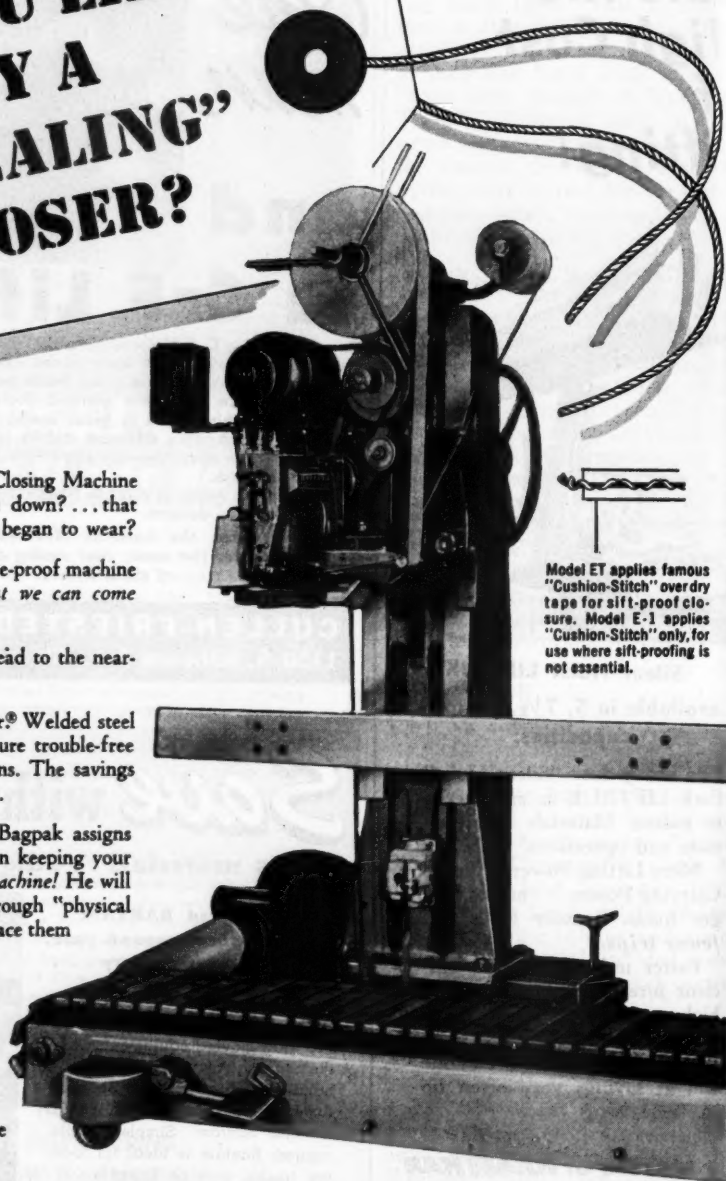
Bagpak has taken two important steps which lead to the near-ideal in Bag Closing Machines.

First, extra strength is built into every Bagpaker®. Welded steel construction and heavy-duty working parts assure trouble-free operation — reduce lost time due to breakdowns. The savings on this alone can be tremendous over the years.

Second — and perhaps the most important — Bagpak assigns an experienced Service Engineer to assist you in keeping your Bagpaker in tip-top shape, *for the life of the machine!* He will make regular visits to give the machine a thorough "physical check-up" ... to look for wearing parts and replace them *before* they can cause a breakdown.

This kind of "preventive service", in addition to the extra serviceability built into every part of every Bagpaker, makes the Bagpak Machine the nearest thing to the ideal Bag Closing Machine you can possibly buy.

For more details about the *better* Bagpaker, write today for booklet 250-L.



Model ET applies famous "Cushion-Stitch" over dry tape for sift-proof closure. Model E-1 applies "Cushion-Stitch" only, for use where sift-proofing is not essential.

## International Paper Company



220 East 42nd St., New York 17

BAGPAK MULTI-WALL BAGS

BAG PACKAGING MACHINES

BRANCH OFFICES: Atlanta • Baltimore • Baxter Springs, Kansas • Boston • Chicago • Cleveland • Denver • Los Angeles • New Orleans • Philadelphia • Pittsburgh • St. Louis • San Francisco.  
IN CANADA: The Continental Paper Products, Ltd., Montreal, Ottawa.

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# PACKAGING MECHANICS SECTION

## CONTENTS

Washington Packaging

Men Speak to Industry . . . . 78

### A Message from the Military:

FLOW went to Washington recently to interview Col. John A. Way, Chief, Munitions Board Packaging Division. If you're in doubt as to where packaging specifications may be obtained, these statements will be important to you.

1. Where to obtain packaging specifications: invitation-to-bid sets, mailed to interested suppliers, contain specification on the method and type of packaging required.

2. To whom do you refer questions: all inquiries should go to the procuring agency.

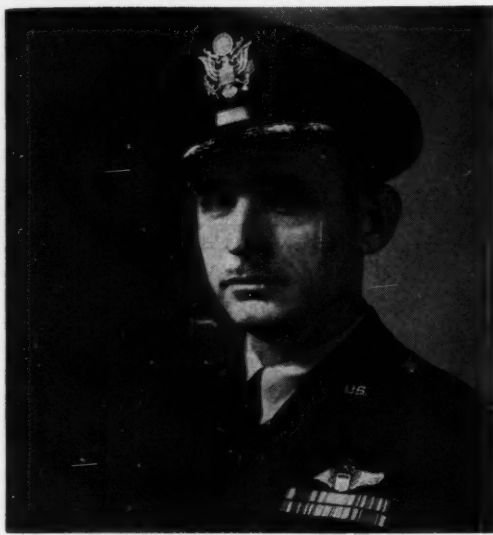
3. How to get special or several military packaging specifications when you do not have a contract: Custodians of specifications have been appointed in each military agency most interested in the item.

4. How to contact custodians: write to FLOW for the Army Index of Specifications, the Navy Index of

Specifications, or the Index of Specifications and Bulletins approved for Air Corps Procurement. All are free of charge except the Army which is \$1.50 a copy for one year. This literature contains a list of all specifications used by the departments plus the custodians.

It is important to note that a great cause of confusion is how to deal with the government. If there are any questions as to needed information to bid or to meet bids, *by all means see your local contracting officer*. Dealing with the government isn't as tough as most people imagine. If you have questions remember these three rules. 1. First contact your local man. 2. If he can't help you, write to the service branch man in Washington. 3. If you still need help, contact Col. Way's office at the Munitions Board. But remember, see your local man first—nine times out of ten he can answer your questions.

Turn the Page for Interviews With Washington Packaging Experts



Colonel John A. Way is Chief of the Munitions Board Packaging Division. During World War II he commanded a B-24 Group in the Mediterranean Theatre of Operations. He was Deputy Operations Officer, Manila Air Depot in 1946 and later commanded Clark Field Air Force Base in the Philippines. He attended the Naval War College in 1948 previous to his present position in the Pentagon. A graduate of the University of Oklahoma, Colonel Way entered the United States Army as an Air Corps Cadet in 1932.

## Washington Packagingmen

. . . . Colonel John A. Way

"We have established an advisory group from Industry in order to obtain a closer liaison and obtain the viewpoints of producers and suppliers of our material and equipment, and the large users of packaging materials. We shall attempt to maintain a close contact with Industry in order to gain a better understanding of the mutual problems that confront us."

### THE TECHNICAL ASPECTS OF PACKAGING AND PACKING IN THE DEPARTMENT OF DEFENSE

The first amazement experienced by a soldier when he reaches a theater of operations is the mountainous piles of boxes everywhere. They give him confidence. He realizes that in all those boxes is his food, his clothing, his equipment and supplies. He realizes that he is being "backed up".

To us in packaging those boxes represent a responsibility—and a very important one—that inside each box is an item of supply that is ready and fit for its intended use.

#### "Damaged Equipment May Mean Lives"

A broken or damaged item can't properly be written off at unit cost, which is a general practice. Damaged equipment may mean loss of lives, or the success of a campaign. Those things have no price tag. It means less of precious space on ships, critical materials and manpower.

Those boxes have a greater function than a materials handling medium. We must build them to fit pallets, to go through hatches, to bang around in holds of ships on a rough sea, to withstand crushing in un-

loading nets, to be lifted with slings or hooks—bounced and rolled and stacked again and again. Each of those boxes is a warehouse—a little warehouse that must weather rainstorms, tropical sun, humid air that induces rot and decay, freezing temperatures, salt spray, and oftentimes is subject to dunking in salt water.

Military planning must be for war. If this assumption were not made, there would be no reason for maintaining a military force. Modern methods of warfare have greatly increased the need for ability to move rapidly to remote parts of the earth with large forces. Rapid-fire weapons and mechanized equipment swallow up large amounts of supplies and fuel. The logistic phase of warfare has grown to staggering proportions and it is continuing to grow. Logistic plans must continually be developed to keep in phase with those demands.

#### "Preservation Is Being Emphasized"

Preservation is currently being emphasized and methods being devised and revised to bring it into step with new developments. Light preservatives that will not require a delay and man-hours in cleaning for use—and that will act as an initial lubricant for machined parts—are being developed. Vapor

(Turn to page 86)

Tom Wharton has been associated with military packaging during World War II and since. A graduate in civil engineering, his experience has been with the Corps of Engineers and with Headquarters, Army Service Forces. At present he is Chief of the Packaging Section of Army General Staff and serves as Vice-Chairman of the Army Packaging Board. He represents the Department of the Army on the Packaging Panel of the Research and Development Board, and represents Army General Staff on the Packaging Committee of the Federal Specifications Board.



## Engineers Speak to Industry

Tom Wharton . . . .

"We need industry—you must adapt your facilities to our needs or we will fail. To do this, you must anticipate our future needs, based primarily on the last war perhaps and you must be willing to do this without any positive guarantee from the Government. At the same time, the Government must ask you to conserve, and to play fairly in this effort."

### THE PACKAGING PROGRAM OF THE MILITARY DEPARTMENT

In talking with men who have come to Washington, I know that they wish a clearer understanding of our policies. I believe they are interested in the standardization of packaging for the purposes of procurement—standardization which finds its way into print in the form of specifications. They are also interested in the new developments in which we are engaged to improve existing materials, methods and procedures. I believe they are interested in our training program and in the fact that we are not only thinking of training our own personnel, but also wish to better familiarize our contractors with military methods and procedures. Since an emergency has been declared by the President of the United States, they are obviously interested in our opinions as to the impact of present conditions on our procurement program and our packaging program.

#### "Most of Our Packaging Policies Today Stem from Unification"

In the field of packaging, perhaps more than in any other field in the Army, Navy, and Air Force, unifica-

tion is a reality. That is not to say that one hundred per cent standardization and uniformity has been accomplished. However, all of our policies and our entire packaging effort is devoted to the joint achievement of adequate and uniform packaging. Packaging requirements should be identical for all activities within the military establishment when handling, storage, and issue conditions are similar. Accordingly, all packaging documents are being prepared in accordance with this policy, and existing instances of conflicting packaging requirements will be eliminated. Non-uniform packaging requirements must be wholly justified before they are permitted in specifications. In a particular plant where alternatives are permitted and a choice is the prerogative of the Government, the service or bureau with the largest procurement interest will determine the particular packaging to be used. All of the services and bureaus procuring from that plant must accept identical types of preservatives and materials unless such methods can be shown to be inefficient or uneconomical for the minority user. It is the policy of the military departments that when packaging has been standardized in specifications, other publications regarding preservation, packaging, and packing will be kept revised to agree with these basic specifications. Therefore, instances of conflicting publications will become fewer and



fewer as time goes on.

It is military policy that the quantity of items in each package will be the same for the Army, Navy, and Air Force. In addition to the weight, cube, and maximum dimensions, the following criteria are used in determining the number of items per package:

1. The minimum quantity normally required in use, such as the number required for an overhaul.
2. The frequency of issue as established in the departmental allowance list.
3. The minimum quantity which will afford an efficient pack; for normal commercial items this will probably be the commercial quantity.
4. Where other overriding factors do not govern, we attempt to pack in quantities of ten or multiples of ten to afford ease of accounting in our complex stock control system.

It is the policy of the military departments that all items subject to deterioration or damage in shipment or storage will be provided with preservation and interior packaging at the level which we have found to be necessary for overseas shipments or long term storage. However, when conditions are known to be less hazardous, or an item is scheduled for domestic shipment only, or limited storage period, or for current use at a known destination, this level of preservation and interior packaging may be lowered by the procuring agency. Known overseas shipments are packed in shipping containers complying with our overseas shipping container specifications. On the other hand, it has been our policy that unless an item is scheduled for overseas shipment it will be packed in a shipping container of the type found to be necessary for domestic shipment, provided that this container is compatible with military conditions.

### Standardization

The packaging program of the military departments is directed toward the standardization of packaging to the highest practicable degree. Such standardization could not easily be achieved without the cooperation of the industries manufacturing containers and packaging materials and the industries supplying material to the Armed Forces. We have come a long way in standardizing our containers and materials. Most of you are familiar with the series of JAN specifications developed during the last war. But specifications are not stagnant things. To progress we must change, and so we are constantly engaged in studies for the improvement of our containers and of our standard packaging materials. This improvement results in amendments and revisions to specifications; however, these changes need not be confusing since most of them represent minor modifications of existing materials rather than completely new materials.

There is a third type of packaging specification, in addition to those for containers and materials, and that is a specification covering a packaging procedure

for a group of similar items, such as hand tools, electrical spare parts, etc. These specifications are more difficult to develop and, until an industry has become more familiar with the one which applies to it, they may be more difficult to use. We must realize, however, that the issuance of such a specification means that the military departments have established a level of preservation and packaging which they require for procurement. We have established a level of protection which must be required of competitors within the industry in order that the items will survive the rigors of our supply line until they are in the hands of the user. This is essential in military procurement.

Another more complex phase of our standardization work is the standardization of test procedures which we use to test packaging and packing materials and finished packages. Again we are working with industry through societies such as the ASTM and TAPPI organizations, so that the military departments may adopt standards which are, at the same time, acceptable to industry.

In speaking of specifications and procurement, many of you are searching for information on: "How can I sell to the Army?" "How can I sell to the Navy?" "How can I do business with the Air Force?" We want to help you; we need you and your product. If you have not already done so, I would suggest that you secure copies of pamphlets issued by the military departments answering this very question. In brief, these pamphlets describe the military procurement system as being made up of a number of procurement offices, each of which procures certain categories of items. Effort has been made to simplify this system for you by establishing a system of *single service* purchase assignment by which we allocate the responsibility for the purchase of certain categories of items to certain procurement offices. In this way it is simpler for the manufacturer of, say, paper products to deal only with the New York Quartermaster Purchasing Office rather than to be required to peddle his papers to all of the procurement offices throughout the country. Copies of these pamphlets may be obtained from the Munitions Board, Office of Procurement Information, Washington 25, D. C.

For some of our materials we must insist upon products which have previously passed certain tests and proved to be of the type and quality desired, since some of these tests require a lengthy period of time. It is therefore necessary to establish what we call a qualified products list in order that we may know at a glance who are our acceptable suppliers. The establishment of a qualified products list prevents lengthy delay in the acceptance of materials at the time of purchase. If you manufacture a product which, under the current specification requires a prior qualification approval, I would urge you to contact the office listed in the specification to determine how and where you should submit samples for test. This testing is done without charge. If your material

**THERE'S AN INTERNATIONAL  
Retractable Anvil STAPLE  
MACHINE TO ECONOMICALLY  
CLOSE YOUR CARTONS!**

Over thirty models available—each closes  
filled corrugated or fibre cartons *from the  
outside*—the larger models staple *tops and  
bottoms simultaneously!*

You save time, labor, money and prestige!  
You reduce pilferage and damage claims  
to an absolute minimum!

You can't afford to be without an Inter-  
national Staple Machine!



**INTERNATIONAL STAPLE  
AND MACHINE COMPANY**  
**HAVERTOWN, 16, PA.**  
Factories in HERRIN, ILL. AND HAVERTOWN, PA.

**A PARTIAL LIST  
OF INTERNATIONAL DISTRIBUTORS  
AND REPRESENTATIVES . . .**

. . . each one is specially  
trained to intelligently recom-  
mend the proper International  
Staple Machine Model to fill  
your needs.

. . . each is equipped to ex-  
peditly install and service your  
Machine.

. . . each has a print of  
"Retractable Anvil Stapling",  
our sound motion picture film,  
which can be shown right in  
your own office at your con-  
venience.

- Atlanta, Georgia  
The Tidwell Company
- Baltimore, Maryland  
Duo-fast Maryland Company
- Burlington, Iowa  
Ebert Supply Company
- Chicago, Illinois  
C. D. Vickers and Company
- Cincinnati, Ohio  
Cincinnati Shippers Supply Company
- Cleveland, Ohio  
Great Lakes Shippers Supply Company
- Dayton, Ohio  
Dayton Fastener Company
- Denver, Colorado  
Plant Equipment Company
- Des Moines, Iowa  
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- Detroit, Michigan  
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- Indianapolis, Indiana  
J. R. Hahn Company
- Jacksonville, Florida  
Fla-Ga-Lina Staple Machine &  
Supply Co.
- Little Rock, Arkansas  
Bigelow Robinson Company
- Los Angeles, California  
Shipping Room Supply Company
- Milwaukee, Wisconsin  
The Glenn Co.
- Minneapolis, Minnesota  
Shippers Supply Company
- New Orleans, Louisiana  
Business Controls, Inc.
- Oakland, California  
John T. Francis
- Philadelphia, Pennsylvania  
Frank Hanline and Sons
- Pittsburgh, Pennsylvania  
C. E. Dunbar
- Roanoke, Virginia  
Stewart J. Counts
- Seattle, Washington  
Prime Company
- Springfield, Mass.  
A. D. Rossi
- St. Louis, Missouri  
Shipping Utilities

- Havana, Cuba  
Deminguez Trading Company
- Toronto, Canada  
General Shipping Equipment Ltd.
- Melbourne, Australia  
Farrow Falcon Press Pty. Ltd.



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passes the test it is listed on a qualified products list covering the specification for that material and you will receive invitations to bid on each procurement. If your material fails the test you will be advised of the test results and wherein your material failed. These lists cannot be used for promotional purposes, nor can you change the formulation of your material in any way once it has qualified without resubmitting it for requalification under a different name or number.

Since much of our purchasing of items is direct from vendors, suppliers of containers and packaging materials must deal with those vendors as subcontractors. In order to assist subcontractors in learning what the military departments are purchasing, the United States Department of Commerce has established an informational service. At some forty-two field offices of the Department of Commerce there are maintained lists of awards made daily by military procurement offices throughout the country. These lists are available to all who have a legitimate interest.

### Research and Development

Another element of the Military Packaging Program which goes hand in hand with standardization is the continuing research and development of new materials, methods and techniques. There are a number of military laboratories engaged in continuing studies to improve military packaging. To reduce duplication, attempt is made to allocate the responsibility for development work in the various phases of military packaging to different laboratories. Normally, responsibility for research work rests with the service responsible for the specifications in that field. (For example, specifications for packaging adhesives have been placed under the responsibility of the Chemical Corps, whose laboratories are located at Edgewood, Maryland.) However, there are some specifications covering matters of equal interest to the Army, the Navy and the Air Force, and it has been impracticable to allocate responsibility to any one department or to any one laboratory. The most controversial one, you may have guessed, is JAN-P-131 covering our vapor proof barrier material. In order to insure a minimum duplication of effort in the development field and also to insure that all important fields of development are being actively pursued, there has been established in the Research and Development Board a panel on packing, packaging, and preservation. This panel consists of a civilian chairman and representatives from each military de-

partment. This civilian chairman might be considered the counterpart of Colonel Way, on the staff of the Munitions Board—the Munitions Board being concerned with procurement and industrial matters and the Research and Development Board with our development program.

We have a definite mission in the field of development work and we need the cooperation of industry as we search for newer and better materials and methods. Some of you may be interested in development contracts with the military departments. The negotiation of a contract of this sort is in order when the technical services do not have the personnel or equipment necessary to carry out a particular project. To obtain such a contract it is necessary for you to deal directly with the Army technical services and Navy bureaus to determine the unassigned projects in which they have an interest and with which you may be equipped to help.

### Training

Colonel Way mentioned the packaging and packing training guide that is under preparation. This guide will be in the nature of a manual or handbook containing basic military packaging and technical information. Although it is not the intention to use this manual as a procurement document, when available it should serve as the military packaging "Bible" within the military departments and throughout industry. It will contain detailed explanatory information relative to cleaning, preservation, containers, packaging materials, and equipment, which does not properly belong in a legal procurement document such as a specification.

We have established at Rossford Ordnance Depot, at Toledo, a packaging training course. Classes are of two weeks duration and the course has been established on a continuing basis. The spade work for this course was done largely by the Ordnance Corps in conjunction with the Automobile Manufacturers Association, the Association of the American Railroads and the Forest Products Laboratory. Instructors have been obtained from the Forest Products Laboratory. There have been allocated five spaces in each class for representatives from industry, five spaces for the Air Force and five for the Navy, although the course is primarily an Army-sponsored course. The doctrine being taught at this course is basic packaging doctrine which is essentially the same for all three military departments. It has been designed for supervisory and foreman personnel at the depot or plant level. Considerable interest has been shown by industry in sending representatives to the course—so

Due to the importance of these messages from Col. Way and Mr. Wharton, we were forced to omit the story on the operations at the Vendo Co., in Kansas City. This was mentioned in the February "Handling Idea of the Month." This report will be found in a forthcoming issue.—The Editors.



# EASY TO READ STENCILS



**SPEED  
HANDLING**



THREE SIZE  
MACHINES, CUT  
 $\frac{1}{2}$ ",  $\frac{3}{4}$ ", 1" STENCILS

Marsh Stencil Machines  
meet Federal  
specifications  
GG-M-91



**MARSH K-1 BLACK STENCIL INK**  
No shaking needed.  
Blacker marks ...  
weatherproof ... fast  
drying. Write for  
FREE pint sample.



**MARSH FOUNTAIN BRUSH**  
"Push Button" finger-tip  
control assures neat, attrac-  
tive marking on shipments.

**MARSH OIL BOARD**  
Cuts clean, perfect stencils  
that last for 3000 markings.

**Does the busy freight handler spot your goods immediately... send them safely, speedily, on their way to your customer?**

Or does he slow up your deliveries trying to decipher illegible hand-lettering, poorly typed labels, tags ... other inefficient methods of marking?

Only STENCILS give you bold, easy-to-read addresses—the kind recommended by the railroads and trucking lines.

Association of American Railroads says, "STENCILS contribute very materially to prompt and correct deliveries." American Trucking Association says, "A shipment properly stenciled is off to a good start on its journey to destination."

Only the MARSH Stencil Machine gives you the Word Space Button, Hardened Dies and Quick Replaceable Punches, Streamlined Hood, Sealed-In Lubrication and other superior features.

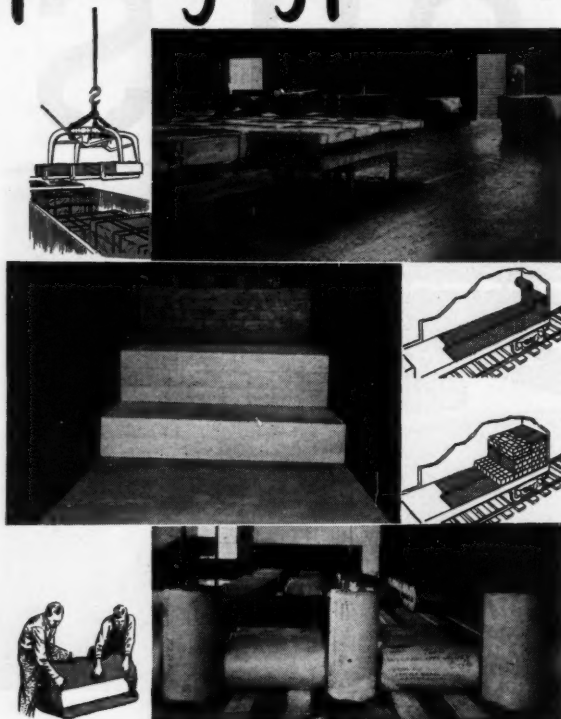
Send your orders to nearest Marsh Dealer. Stocks in all principal cities. Or write for free Handbook.



MARSH STENCIL MACHINE CO., 67 MARSH BLDG., BELLEVILLE, ILL., U.S.A.

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# What's your packaging problem?



## FIBREEN ASSURES COMPLETE PROTECTION

You will find FIBREEN has everything you need for protective packaging or wrapping, because . . .

- 1 — FIBREEN is **STRONG** . . . rugged, laminated kraft sheets, reinforced with tough, closely cross-laid sisal fibres.
- 2 — FIBREEN is **MOISTURE-PROOF** . . . double layers of highest quality asphalt prevent moisture penetration.
- 3 — FIBREEN is **CLEAN** . . . both top and bottom sheets are surface-treated, top-grade No. 1 Kraft.

Qualified consultants are available to help you use FIBREEN to best advantage in solving your package-protection problems.



Write Dept. F-3  
for free samples and data.

a product of  
**THE SISALKRAFT CO.**, 205 W. Wacker Dr., Chicago 6, Ill.  
New York 17, N. Y. • San Francisco 5, Calif.  
London, England • Sydney, Australia

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**FLOW • MARCH, 1951**

much so that it may be sometime before we are able to satisfy the demand.

### Impact of Present Conditions

All policies are subject to continued study and change. Mobilization would undoubtedly result in a change in this policy to the point that all supplies and equipment which may be used in overseas operations must be preserved, packaged, and packed for overseas shipment. Thus, we will need more containers and materials. It is obvious that most of this packing must be accomplished by the supplier (or vendor) at the time of procurement to allow our military installations to devote their effort toward necessary repacking of items already in the supply pipe-line. This should result in increased activities by vendors and by packaging subcontractors. We trust that in being more familiar with our policies and program, it will help you to understand our aims and objectives, and will gain your cooperation in bringing these things about.

We honestly believe that American industry is willing and able to provide the military departments with the materials that they need to preserve, package and pack for delivery as required by our military supply line. It is essential that we describe our desired packaging requirements in specifications along with the requirements for the item being procured. Bid prices will, of course, include not only the cost of the item but the cost of this essential military packaging.

## As many shipping labels as you need... WITHOUT extra typing!



### NO STENCILS — NO PLATES — NO RIBBONS — NO INK

Lab-L-Master is an entirely NEW system for addressing shipping tags and labels. Now you can save time in making multiple labels for shipments. Press Lab-L-Master on shipping order—pressure sensitive tape holds it firmly in place (see photo). Type name and address in usual manner. ONE TYPING prepares shipping order and Lab-L-Master at the same time! Place Master in printer—then roll printer over labels or tags (Inset photo). Address as many as you need—up to 200 copies from one Master! Lab-L-Master prints on plain or gummed labels, tags, folders, or anything that requires repeat impressions.

Write for literature and name of nearest dealer.

**Master Addresser Co.**

6500-F West Lake Street, Minneapolis 16, Minnesota

Circle No. 84 on Reader Service Card for more information

**PACKAGING MECHANICS SECTION**

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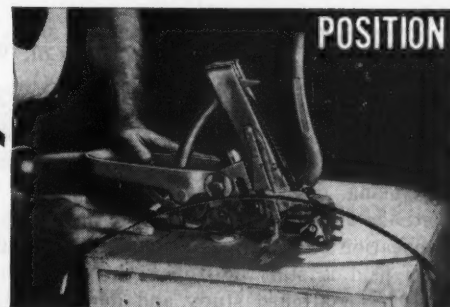
# 4 STEPS 5 SECONDS

*with the improved*

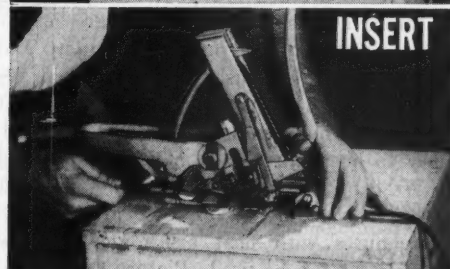
## STANLEY ACE STRAPPING TOOL

Here's how to put strapping on a production basis. This improved STANLEY ACE STRAPPING TOOL is light — fast — simple — even a beginner can make time with it. Magazine holds 100 seals — is easily loaded and seals in any position. The "Ace" is made in three different sizes, to handle  $\frac{3}{8}$ ",  $\frac{1}{2}$ " and  $\frac{5}{8}$ " strapping.

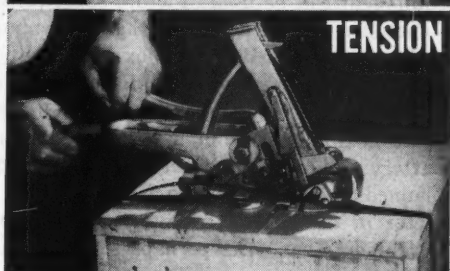
Decide now to put the "Ace" to work for you! Write for full information or ask for demonstration.



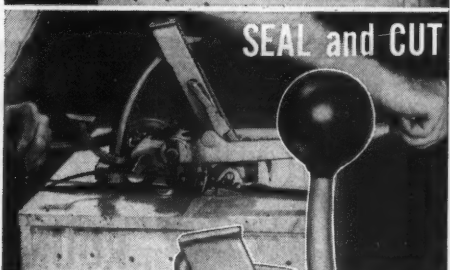
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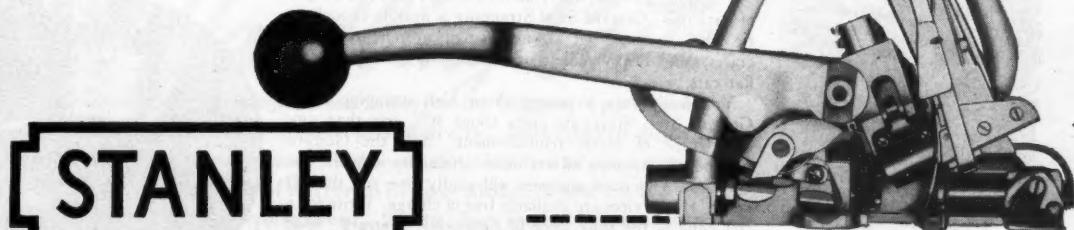
INSERT



TENSION



SEAL and CUT



**STANLEY**

Reg. U.S. Pat. Off.

HARDWARE • TOOLS • ELECTRIC TOOLS  
STEEL STRAPPING • STEEL

SEND FOR BOOKLET ➔



The Stanley Works  
Steel Strapping Division  
203 Lake Street, New Britain, Conn.

Gentlemen: Please send me free folder on the Improved ACE Strapping Tool.

Name.....  
Title.....  
Company.....  
Address.....  
City..... State.....

Circle No. 85 on Reader Service Card for more information



Remarks by Col. Way . . .

(Continued from page 78)

phase inhibitors that will do an adequate job of protecting parts from rust in case moisture gets to them are being developed and standardized. Cleaning methods and materials that save time by high-speed application by ingenious machines are being devised. This field is still wide open to improvements and deserves continued study and development.

Improved cushioning materials are being developed and tested that are proving adequate and easy to apply to "hard-to-cushion" items. High-speed packaging machinery is being developed that can be adapted. These machines must be modified as necessary to keep abreast of materials and methods.

We cannot sacrifice quality and durability for the sake of economy. We don't always have storage warehouses with neat aisles and racks where lift equipment can be used. Picture those piles of boxes, sometimes 40 feet high, in a hard downpour of rain and a sea of mud. Picture a box with a cable from the winch of a 4x6 wrapped around it, being snaked out of that stack, through the mud and onto a truck. That box may contain a delicate computer for a battery of guns being set in position to cover a planned advance. Are we to use economy as a primary factor in the cost of a pack that will protect that instrument that costs perhaps several thousand dol-

lars? I'm sure you must agree with the answer. Every one of those boxes, even though it might not contain an instrument as in the example taken, does contain an item that is just as necessary in overall plans. If it's worth getting there, it's worth getting there in good condition.

#### "Packaging Manual Is on the Way"

We must depend on our suppliers to a great extent to adequately package and pack our supplies; we do a very minor part of our own packaging. We attempt to give adequate instructions in how an item must be packaged and packed. We still have not completed our program of standardization on methods of packaging and packing. Sometimes two or three separate packaging lines for the same item are required due to this lack of standardization. We are attempting to remedy this situation as rapidly as possible and are making progress. Numerous projects are being jointly worked on and coordinated by the military services. We are collecting and coordinating into a single document various services, bureaus and command instructions. A basic packaging manual for joint use of all Military Departments is well on its way toward completion. But in some cases standardized methods are not adaptable nor desirable. Some differences are justifiable, but those I believe are few.

**NO  
MORE  
WORRY**



Gerrard Steel Straps protect bundles of steel sheets for export. Round Strapping permits such bundles to slide over each other without tearing the straps.

## ...when you tie with **GERRARD** ROUND STEEL STRAPPING

● You don't have to worry about "condition on arrival" when you tie packages, pallets, cartons or crates with Gerrard Steel Strapping. It clinches tightly, grips evenly, holds firmly despite rough handling, and keeps your load or package in first class condition.

You don't have to worry about the size, shape or weight of packages. Gerrard Steel Strapping is flexible enough to tie small cartons, yet strong enough to reinforce large crates, bind heavy pallets or secure bulky machinery to flat cars.

You don't have to worry about high strapping costs. Gerrard Steel Strapping costs about 40% less than any other type of metal reinforcement. And the Gerrard method of strapping effects other economies in plant operations. A Gerrard engineer will gladly give you the full story. His services are available free of charge. Write for a free copy of the *Blue Book of Packaging*. **Gerrard Steel Strapping Company, 2937 W. 47th St., Chicago 32, Ill.**



Gerrard Round Steel Strapping kept this corrugated carton firm and rigid during a test trip of 1604 miles. Carton contained 1000 yards of printed flannel, weighed 250 lbs., travelled LCL on at least two railroads, was reinforced with 15 ga. Gerrard Round Straps, returned contents in perfect condition.



Wood Products securely bundled with galvanized Round Strapping applied with Model Q Semi-automatic Tying machine.

**UNITED STATES STEEL**

Circle No. 86 on Reader Service Card for more information

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Circle No. 87 on Reader Service Card for more information

## Got a Room for the Show?

If you're going to the Fourth National Material Handling Exposition and you haven't taken care of hotel reservations, better get at it pronto. AMHS spokesmen have reminded us that there is no central housing setup for show visitors this year; but 175 rooms have been reserved by the Society for members. If you need a room and you're an AMHS member, write William J. Cost, Hotel Sherry, 53rd and the Lake, Chicago 15, Illinois. Mention your AMHS chapter affiliation. For the first time, some of the show's exhibitors will be showing off their equipment outside. Huge yard handling machinery that can't be taken into the exposition hall will be put to work out on the grounds in working demonstrations.

FLOW'S May issue will be distributed to visitors at the show. Watch for it—it will be the biggest, best, most unusual issue we've ever put together.



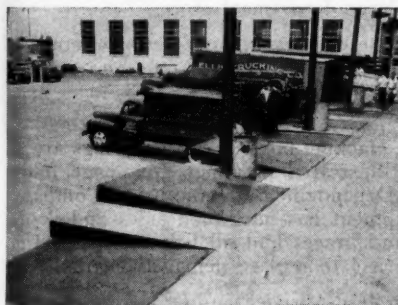
## For \$97.50 You Can Test Three Dimensional Layout

### Using Our Sample Kit

The kit contains 209 models on  $\frac{1}{4}$ " scale, plus a 12" by 18" lucite layout board scored in  $\frac{1}{4}$ " graph columns and "visual" layout tape. All kinds of production machinery, benches, trucks, conveyors, loaded and empty pallets, office equipment and male and female operators come with the outfit.

### Immediate Shipment

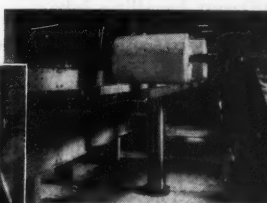
**"VISUAL" PLANNING EQUIPMENT CO., INC.**  
Pennsylvania Ave. at River, Oakmont, Allegheny County, Pa.



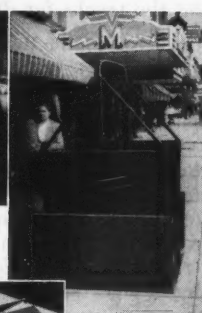
Tilting Loading Dock Ramps



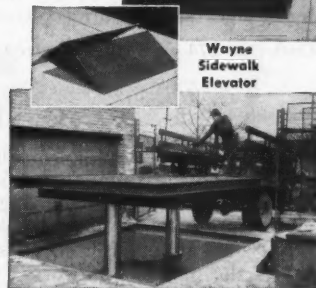
Straight Platform Lift with Full Skirt Electric Pump Operated



Wayne Lift in Newspaper Plant



Wayne Sidewalk Elevator



Straight Platform Lift — 2 Cylinders  
Platform Lift Air/Oil Operated

# Cut Handling Costs

**BETTER** material handling offers industry its biggest opportunity to cut production costs and to increase productivity. Investigate what it can do for you. Let Wayne engineers help you develop the proper equipment to assure better handling of material in your plant. There's a Wayne Hydraulic Lift for every requirement. Write for more information.

## WAYNE INDUSTRIAL HOISTS



**MAIL NOW FOR MORE FACTS**



THE WAYNE PUMP CO. • FORT WAYNE 2, IND.  
516 TECUMSEH STREET

Please send folder and complete information on Wayne Industrial Hoists. Type

NAME

ADDRESS

CITY

STATE

AIR COMPRESSORS • HOSE REELS FOR OIL, GREASE, WATER, AIR • BULK PUMPS

Circle No. 88 on Reader Service Card for more information

**USEFUL**

## **BULLETINS • BOOKLETS • CATALOGS**

The publications featured on these pages were written by experts. They are FREE publications. To obtain them use the postcard bound into this issue.

"Extra Arms and Hands for Towmotor One-Man Gang" is what Towmotor calls its standard accessories. They are all shown off in the company's new accessories folder. Printed in color, the folder shows such Towmotor accessories as the crane arm, extension back rest, unloader, scoop, side shifter, cotton truck, hydraulic scoop and a raft of others.

Circle No. 172 on Reader Service Card for more information

Design and construction features of Baker-Raulang FT fork trucks have been translated into user benefits by a new bulletin published by the manufacturer. Designed to give you all the information you want on Baker trucks, the bulletin contains drawings and photos of the trucks' major parts; detailed specs; illustrations of some of the attachments you can use on the trucks for different handling jobs.

Circle No. 173 on Reader Service Card for more information

Cranes, transfer bridges and tramrail systems made by the Forker Corporation are illustrated in a new four-page Forker bulletin. The catalog shows a raft of installation photos and parts details. It also carries a complete story on the Ohio Tramrail Shielded Electrification System for safely motorizing cranes, transfer bridges and tramrail systems.

Circle No. 174 on Reader Service Card for more information

Got a bag closing job? The portable bag closer Dave Fischbein Company makes allows you to carry the machine right to the bags. Fischbein says the closure its machine makes is stronger than the material surrounding the stitches, in a new folder that shows the machine at work.

Circle No. 175 on Reader Service Card for more information

Adjustable pallet racks can help you uncover valuable floor space, eliminate duplicate handlings. In a new folder released by Rack Engineering Company, dozens of photographs show how other companies have saved money by using the adjustable racks.

Circle No. 176 on Reader Service Card for more information

Selection of bearing type and size for various conditions of load and speed is considerably simplified and illustrated by examples in the new 20th edition of the New Departure ball bearing catalog. Load rating tables give both radial and thrust capacities for all bearings except certain specialized types; speeds have been arranged to include those for synchronous motors.

Circle No. 177 on Reader Service Card for more information

Case histories in a new bulletin published by Samuel Olson Manufacturing Company show how a single conveyor line with Olson powered sorting turntable does the work of many conveyor lines to reduce the handling cost per package. The bulletin also shows improved efficiency in distributing incoming merchandise by a large department store.

Circle No. 178 on Reader Service Card for more information

Shop trucks, stacking boxes, skids and rings are all described and illustrated in a new four-page folder from Streator Dependable Manufacturing Company. Streator's equipment has hardwood sides and floors, steel corners and braces and all bolted construction that makes it easy to replace damaged boards.

Circle No. 179 on Reader Service Card for more information

Four ways to increase your production are shown in a booklet published by Work-Factor Company. Control of indirect expenses, positive inventory control, full utilization of direct labor and most efficient use of production equipment and plant layout are talked about. Case histories show what improved management can do for production schedules.

Circle No. 180 on Reader Service Card for more information

Large loads are quickly, easily, safely transferred by one man with dumpers made for the job. Streator Dependable Manufacturing Company, in a new folder, tells how you might pep up your operation by using Streator dumpers.

Circle No. 181 on Reader Service Card for more information



All types of multiwall bags are illustrated in Bemis Bro. Bag Company's "Multiwall Packaging Guide." The new booklet tells how to put the different bags to best use; in the face of growing paper shortages, it should be handy to have around. Storage of empty bags, filling, closing, handling of filled bags, palletizing and other subjects are all discussed.

Circle No. 182 on Reader Service Card for more information

Bulletin CL-30 from The Bellows Company describes and illustrates the Bellows Air Motor—the air cylinder with built-in valve and control regulators. Thirty pages of case history photographs, diagrams, wiring circuits, technical information and dimensional data are included. Brief descriptions of other Bellows "Controlled-Air-Power" devices are included: air powered drill press feeds, dial feed table, work holding and clamping devices and other Bellows equipment.

Circle No. 183 on Reader Service Card for more information

For space-conserving, time-saving, low cost storage of any type product or material, Unistrut Products Company thinks you should look into the all-purpose metal framing it makes. In Unistrut's Catalog 600 you get an idea of the raft of different jobs Unistrut can be used for. 24 pages filled with photos show the racks at work.

Circle No. 184 on Reader Service Card for more information

Publication of a new bulletin describing Sterling Wrought Iron Sling Chains has been announced by the Cleveland Chain & Manufacturing Company. Included are sling chain safety rules and full data on chain inspection, use and care. Recommended load limits are listed in detail for various chain sizes and suspension angles.

Circle No. 185 on Reader Service Card for more information

A real encyclopedia of information applying to chain hoists, trolleys, cranes, winches and chain has been put together by David Round & Son. The new catalog shows all the equipment Round makes, along with price lists and complete specs.

Circle No. 186 on Reader Service Card for more information

Eighteen pages in color are used by Towmotor Corporation to illustrate every detail of its new, improved Model W electric pallet truck. The Model W is pallet-type unit, specially built to handle pallet-loads up to two tons.

Circle No. 187 on Reader Service Card for more information

A continuing study of bearing maintenance techniques and successful maintenance, installation and removal methods has been published in pamphlet form by The Anti-Friction Bearing Distributors Asso-

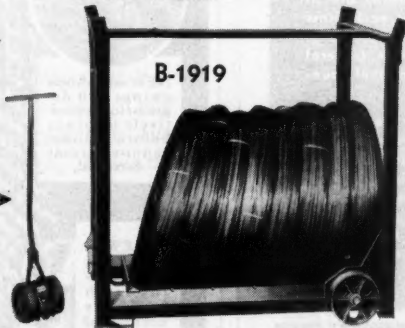
## Clark WIRE COIL TRUCKS



**B-1919** — Stacking type wire coil truck can be used with Clark Lift Jack for quick maneuvering. Stacks with a fork truck to 2 or more tiers high. Built to handle any size coils. Cleated deck. Steel or rubber tired wheels.

**L-234** — Underslung platform. Removable end protected with hardwood strips for handling products such as grinding wheels, large gears, lead pipe coils, etc. Width, and length, and type of wheels to suit.

*All units shown may be had with permanently attached front wheels and handle instead of detachable L-156 Clark Lift Jack.*



**L-215** — One man loads this truck easier than two men load conventional truck. Loads from sides or end. Made to fit any size coils. Cleated deck. Steel or rubber tired wheels.



**All Steel Welded Truck Co.**  
Rockford, Illinois

Circle No. 89 on Reader Service Card for more information

Use Self-Dumping Containers

# MORE Material Handling - 50% Less Time



## WITH ROURA Self-Dumping HOPPERS



### Only ROURA Has the Exclusive Instant Release (Patent Pending) Handle

Handling wet or dry, hot or cold, bulky materials quickly and easily, the ROURA is simple to operate—only one man is required for distributing and unloading—and he does this in much less time than ordinarily required under old-fashioned manual methods. Thousands of Roura Hoppers (which fit any standard fork or platform lift truck) are in constant daily operation, serving and saving for such firms as Owens-Illinois Glass, Corning Glass, National Fireproofing, General Motors, Ford, Chrysler, American Brake Shoe, General Electric, Westinghouse, Western Electric, American Steel Foundries, International Harvester, John Deere, etc.

By a simple lift of the exclusive release handle, the ROURA HOPPER dumps, rights and locks itself securely. Sizes— $\frac{1}{2}$ ,  $\frac{3}{4}$ , 1,  $1\frac{1}{2}$  and 2 cubic yards; the ROURA HOPPER can also be designed for flat trucks and in other sizes to meet specifications. Also, it can be equipped with special flanges that permit stacking to desired tiers for storage or future distribution of materials—conserving valuable floor space. Priced below all competition, the ROURA will quickly pay for itself many times over.

Write today for detailed brochure, "In Dollars & Sense."

## ROURA IRON WORKS, Inc.

1411 Woodland Ave. Detroit 11, Mich.

Circle No. 93 on Reader Service Card for more information

90

ciation. The Association thinks this is the first attempt to publish in permanent form all available maintenance information on every type of bearing.

Circle No. 188 on Reader Service Card for more information

The heavy-duty line of Wayne Crane  $\frac{1}{2}$ -yard crane-excavators, 14 pages of them, are illustrated in a new catalog issued by Wayne Crane Division, American Steel Dredge Co., Inc. Newly completed  $\frac{1}{2}$ -yard excavators have lifting capacities ranging from 8 to  $12\frac{1}{2}$  tons. Each model is convertible to all front-end attachments.

Circle No. 189 on Reader Service Card for more information

Small, low cost electric counters are illustrated in a new bulletin from Production Instrument Company. Standard and flush-mounted non-reset types, roll-back reset types, with dimensional diagrams and prices are all shown in the catalog. The counters are made for practically all A. C. or D. C. voltages.

Circle No. 190 on Reader Service Card for more information

A new front-end loader, the Model TL-10 Tractor-Loader, is described and illustrated in a folder released by Tractomotive Corporation. Complete specifications on the model are given.

Circle No. 191 on Reader Service Card for more information

# NEW

**MODEL-H NOLAN  
1-Man Car Door Opener**

New safety and efficiency features now make the Nolan 1-Man Car Door Opener a more necessary labor-saving, money-saving help than ever before!

**NEW** improved balance assures automatic unlocking of pawl for chain stripping during door opening or closing operation.

**NEW** safetyhook swings 180 degrees; locks positively in place before pulling; cannot become detached.

**NEW** safetyhook with locking latch prevents accidental release when pulling.

**Opens Doors in  
20 Seconds or Less!**

No gangs needed. No mangled limbs or loss of life. A few quick pulls on anchor chain gets any door open in a jiffy. The NOLAN saves its low initial cost in first hour of operation.

**FREE LITERATURE**

Order one or more NOLAN Model-H Car Door Openers now. Catalog on request.

**\$29.50**  
F.O.B. BOWENSTON

**THE NOLAN COMPANY**  
110 Pennsylvania Street • BOWENSTON, OHIO

Circle No. 91 on Reader Service Card for more information

MARCH, 1951 • FLOW

Circle  
FLOW

The latest Coburn models of overhead conveying equipment is shown off in Catalog 200, released by Coburn Products. Everything from enclosed trolley track to cranes and continuous conveyors are photographed and described in the booklet. Complete specs give you the lowdown on each type of equipment.

#### Coburn Products

Circle No. 192 on Reader Service Card for more information

Their new line of "Frame B" Wright Speedway Electric hoists is shown off in literature from Wright Hoist Division of American Chain & Cable Company, Inc. Available in capacities from 250 to 1000 pounds, the new hoists are basically the same as the Wright Frame 1 Speedway Electric hoists; but they are made with a shorter, deeper drum, are lighter and better balanced.

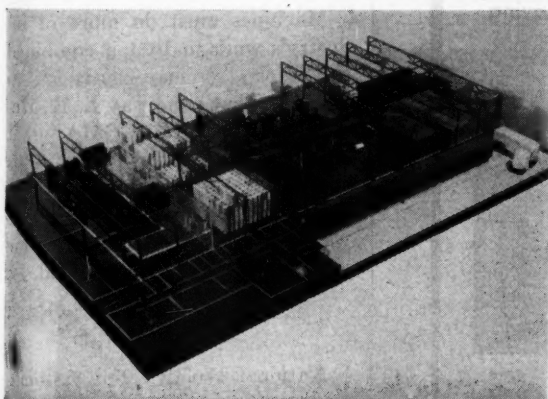
#### Wright Hoist Division

Circle No. 193 on Reader Service Card for more information

Featured in a new straddle truck catalog just released by the Hyster Company of Portland, Oregon is the Model MHS especially designed for handling steel. A variation of the standard 30,000 pounds capacity model MH, this new model is intended for the heaviest kind of work in metals handling. Suspension springs have added capacity to accommodate consistent handling of capacity loads.

#### Hyster Co.

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## PUT LIFE IN YOUR LAYOUT

Roycraft models help put your ideas for layout changes across like nothing else can. They give life to your plans, show just how the proposed layout will look in action. Aisle and overhead space are right there—easy to take in at a glance.

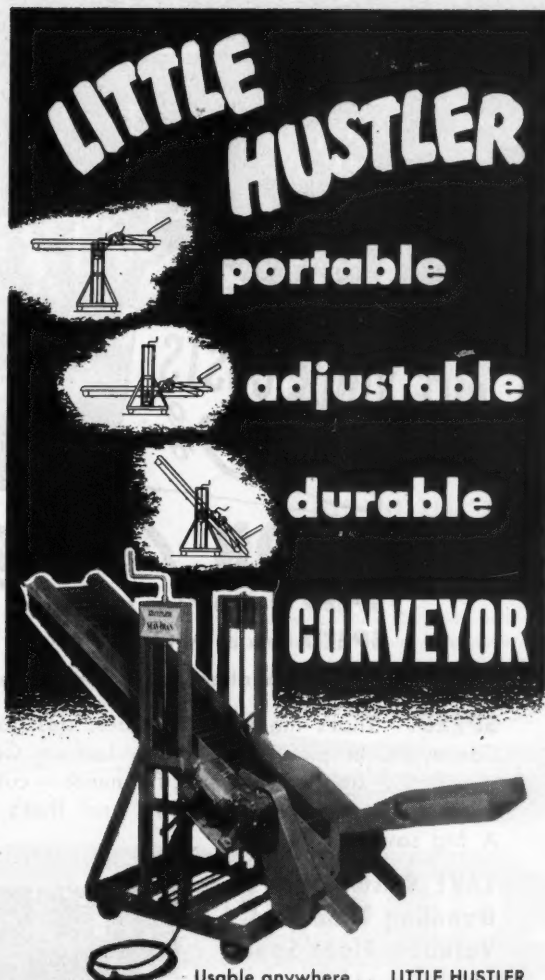
*Write Us For A Survey*

### ROYCRAFT MODELS, INC.

8 South Dearborn Street, Chicago 3, Illinois  
Factory: De Pere, Wisconsin

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FLOW • MARCH, 1951



Usable anywhere... LITTLE HUSTLER is designed especially for applications in which working heights and conveyor layouts change frequently. It is applicable as an auxiliary to permanent conveyor systems, either to feed or discharge items.

LITTLE HUSTLER handles small stampings, castings, borings, turnings and chips. Double-screw center lift regulates conveyor height through 30-inch range, and crank handle adjusts pitch from horizontal to maximum of 45°.

This versatile conveyor features all-steel welded construction, charging chute with positive trap, and two swivel and two stationary casters. Standard belting is cleated white cotton or neoprene impregnated. For applications involving excessive wear, newly developed MAY-FRAN hinged-steel conveyor belting can be supplied.

Power units furnished to meet requirements.

Belt Widths	Conveyor Lengths in Ft.				
12 inches	4	6	8	10	12
18 inches		6	8	10	12
24 inches		6	8	10	12

• Write today for the new MAY-FRAN 8-page, multi-colored catalog for complete price and specification information.



## MAY-FRAN ENGINEERING, INC.

1691 CLARKSTONE ROAD

CLEVELAND 12, OHIO

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**CUT YOUR COSTS**  
UP TO **30%**

## **LAMSON** *Conveyors*

**SPEED** assembly line production.

**SPEED** flow of materials.

**SPEED** handling of finished products.

**SPEED.** That's the word that best describes Lamson Conveyors. In plant after plant, Lamson Conveyors—specifically applied for specific needs—cut materials handling costs at least 30%! And that's a saving. A big saving.

### **SAVE Wasted Effort... Handling Time and Valuable Floor Space.**

In the large Westinghouse Home Radio Division Plant at Sunbury, Pa., the interlocking system of Lamson Conveyors eliminates bottlenecks . . . saves wasted effort . . . and many handling costs.

In the main illustration, radio receivers literally "roll" up to the inspectors on the lower conveyor line. After rigid inspection, they go to the cabinet section for installation and final inspection via the overhead Lamson Conveyors.



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Read how Lamson Conveyors can cut  
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I am interested in moving \_\_\_\_\_  
(Type of product or material)

Name \_\_\_\_\_

Position \_\_\_\_\_

Company \_\_\_\_\_ Address \_\_\_\_\_

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## Association and Society News

William E. Burbank was elected president of the Material Handling Society of New Jersey at the last meeting of the Chapter. New vice-president is S. W. Darling; A. J. Van Benschoten is new secretary-treasurer.

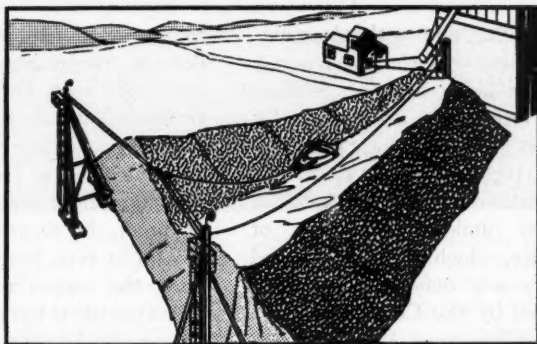
The Society of Industrial Packaging and Material Handling Engineers held its first annual transportation meeting last month in Detroit. Alex E. Berendt, Frank Price and John Muir made up a three-man panel for a discussion of "Rule 41—What It Is, What to Do About It."

Machines must do more of industry's work in 1951 if combined defense and civilian needs are to be met. That's the way L. B. McKnight, president of CEMA put it recently in a year-end review of his industry. "Manpower will be too scarce in the months ahead to waste it on jobs that can be done mechanically," McKnight said.

National Wooden Box Association's mid-winter meeting in Chicago recently took up the theme of wooden box industry's role in national defense. J. K. Cozier, President of the group, announced a record attendance for the two-day meet.

"Developing the Unit Load" was the subject of a speech by John Bucuss at the last meeting of the Midwest Material Handling Society. Latest developments of the unit load were illustrated during the talk.

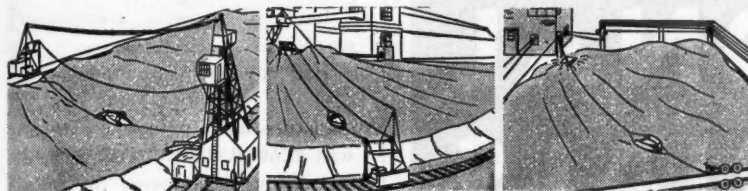
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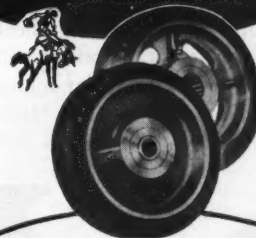
**SAUERMAN BROS., Inc.** 540 S. Clinton St., Chicago 7.



Three of the many types of Sauerman Drag Scraper Systems

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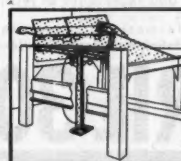
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733 Stanford Ave., Los Angeles 21, Calif.  
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# ADJUST YOUR DOCK INSTANTLY TO ANY TRUCK HEIGHT



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- PAY FOR THEMSELVES IN 30 DAYS



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**ADJUST-A-DOCKS** pay for themselves quickly in shorter handling time, less breakage, and increase usable dock area.

Instant push-button control hydraulically raises or lowers the **ADJUST-A-DOCK** to truck bed height. Rounded steel arms then automatically float the dock at truck level.

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automatic safety control prevents the **ADJUST-A-DOCK** from falling—even with a full load. When leveled with dock floor the **ADJUST-A-DOCK** can support heavy stored loads.

**ADJUST-A-DOCKS** are easily installed—eliminate dangerous dock plates. Tell us your requirements and we'll give you complete information—no obligation.

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for free bulletin giving  
complete information.



VISIT OUR BOOTH No. 839 — Materials Handling Exposition, Chicago, April Thirtieth - May Fourth.

FLOW • MARCH, 1951

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93

**Accounting & Depreciation . . .**  
*(Continued from page 59)*  
 consideration and all other pertinent evidence."

A reasonable rate of depreciation is dependent not only on the prospective useful life of the property when acquired, but also on the particular conditions under which the property is used, as reflected in the taxpayer's operating policy and the accounting policy followed with respect to repairs, maintenance replacements, charges to the

asset account, and to the depreciation reserve. Due consideration should be given to these policies.

The recent tax law passed by Congress contains a provision allowing for a sixty month amortization of emergency facilities obtained under Certificates of Necessity, which are to be issued for necessary defense facilities as approved by the Chairman of the National Resources Administration Board.

In regard to accelerated depreciation,

the Internal Revenue Bureau recognizes that special conditions may entitle a firm to an increased rate of depreciation over the normal rate usually found within an industry for a type of equipment. The burden of proof, in regard to such increases in rate, however, is placed upon the taxpayer. Evidence of increased use is not always enough, it may also be necessary to show a diminution in the useful life of the facility.

Some of the reasons advanced for the use of accelerated depreciation are as follows:

- Overtime and extra shifts
- Overloads and excessive speeds
- Untrained employees
- Lack of trained maintenance employees
- Bad conditions of operation

In one tax court case a company was allowed as much as 60% depreciation in one year on certain equipment. It was shown that earth moving equipment was used continuously for seven months, seven days a week, 24 hours a day, over unusually rough terrain, and under bad dust conditions. The taxpayer's claim was allowed.

Thus we see that while there are certain trends in depreciation rates, no definite rule can be promulgated for each case. The conditions surrounding the situation are governing factors. This, in my opinion, is as it should be; a hard and fast rule might work a hardship on a taxpayer. It is necessary that flexibility in the application of the principle of depreciation be maintained.




# 4<sup>TH</sup>

# NATIONAL MATERIALS HANDLING EXPOSITION

The largest, most comprehensive array of materials handling equipment and machines ever brought together in one place and at one time. More than 200 leading companies will show the materials handling tools that can work miracles of cost reduction, increased productivity, heightened operating efficiency. *See the brilliant new added feature — two outdoor acres of yard handling equipment.*

The country's top authorities will describe newest refinements in materials handling equipment and techniques at technical sessions concurrent with the show.

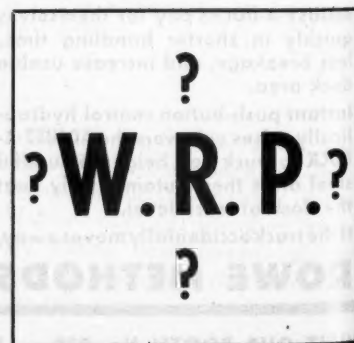
For information, concerning the exposition, address  
 Clopp & Pollak Inc., Exposition Management, 341 Madison Ave., N. Y.

## APRIL 30 - MAY 4

## INTERNATIONAL AMPHITHEATRE CHICAGO




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Two electrically operated up-ending machines each designed to handle 2 rolls of paper at a time. Units turn about the center of gravity of load so operation is smooth. For further information write Box 03151.

Elkhart, La Porte, Benton Harbor, South Bend. Mfg's Rep. seeks additional materials handling lines. Write Louis H. Hansman, 408 East Pokagon Street, South Bend, Indiana.

Complete Loudon Bucket Overhead Conveyor System practically new. Consists of nearly 3,000 ft. of monorail track; 262 steel side-dumping buckets about 45 cu. ft. capacity each; 3 turntables—8 Howe scales. May be inspected any business day—or write for further details. Pequannoc Rubber Company, Butler, New Jersey. R. Love, Industrial Engineer.

## DOLLARS FOR INFORMATION

We will pay 5% commission on all leads furnished to us, which result in our purchase of used handling equipment, such as fork trucks, pallet trucks, cranes, etc. Inform us of such equip-

ment for sale and we will pay you commissions equal to 5% of purchase price if equipment is purchased.

A. & A. MACHINERY CORP.  
1267 Flushing Ave. Brooklyn, N. Y.

## WANTED

Senior and junior engineers, sales engineers and trainees on package conveyors and pneumatic dispatch tubes. Openings available throughout country. Experience desirable but ability, aptitude and ambition more important. Give approximate salary expected and preferred location.

Apply: Director of Personnel  
LAMSON CORPORATION  
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## Graduate ENGINEERS

GOOD OPPORTUNITIES for

## Materials Handling ENGINEERS

Must have eight to twelve years broad and thorough experience with operation, uses of all types of materials handling equipment. Must be familiar with chemical equipment and its operation. Also interested in such engineers with specific experience in wide range of bulk materials handling. Must be graduate.

Give experience, education, age, references, personal history, salary received and salary expected. Please be complete and specific.

All inquiries will be considered promptly and kept confidential.

E. I. du Pont de Nemours & Co. (Inc.)

Engineering Department Personnel  
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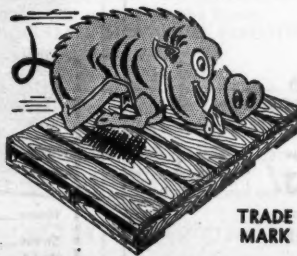
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you get the BEST pallet, but straight-line production keeps our prices competitive with ordinary pallets! Manufactured and shipped when promised!

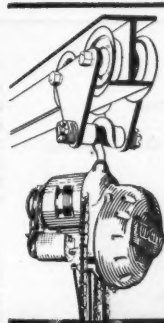
Visit our booths at Materials Handling Exposition in Chicago, April 30-May 4.

## Arkansas Pallet Corp.

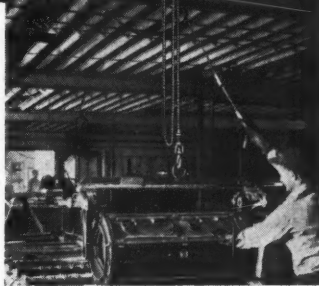
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## DRAFT THIS HOIST!



Greater and greater production is the nation's demand upon industry in these troublesome times. To meet the nation's demand while maintaining the lowest possible operating costs is industry's chief concern. There's a way to do both!

Draft the 'Budgit' Electric Hoist and man it with an older man, a woman, or a teen-age boy and solve your lack of strong, young men to lift parts for guns, tanks, airplanes, and other articles you manufacture. A 'Budgit' is easy to operate, lifting action is fast and effortless for the operator. It's a safe hoist — ready to use the moment it's unpacked.

Check your production, assembly, and inspection lines as well as other spots in your plant where production depends upon load lifting. There's where you will need a 'Budgit' Electric Hoist. Many thousands served in thousands of industries in World War II. They're ready — today.

Available for all standard currents in a variety of speeds. Capacities: 250 to 4,000 lbs. Prices start at \$119. Write for Bulletin No. 391.



'BUDGIT' CORD REELS keep conductor cords taut, up out of way. Cable reels off in all directions. Prices start at \$44.50



## 'BUDGIT' Hoists

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Builders of 'Shaw-Box' Cranes, 'Budgit' and 'Load Lifter' Hoists and other lifting specialties. Makers of 'Ashcroft' Gauges, 'Hancock' Valves, 'Consolidated' Safety and Relief Valves, 'American' Industrial and 'Microsen' Electrical Instruments.

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"A TRADE MARK YOU CAN TRUST"



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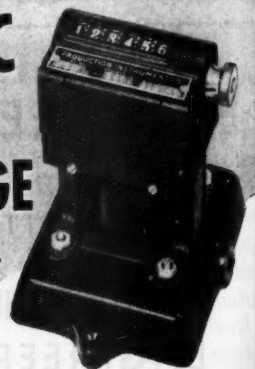
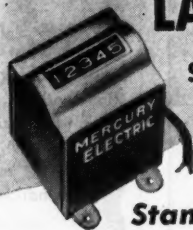
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by **LEWIS-SHEPARD**

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**Buy the type of machine engineered to fit your job!**  
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*The "MASTER" Line*

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*Midwest Plant: CRAWFORDSVILLE, INDIANA*

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# only SIBERIAN LABOR

## is cheap

is of little consequence.

● But in your plant, labor is not cheap and the amount a worker produces has a very definite relationship to your profit.

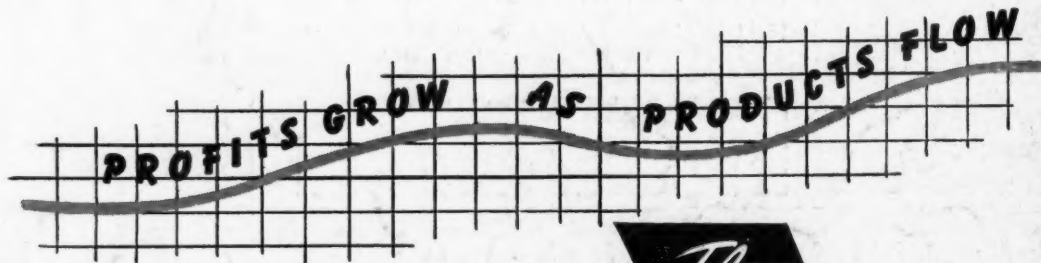
● Is it good business, then, to make your expensive labor do the same menial, back-breaking tasks performed by slave labor when, through the use of modern materials handling equipment, expensive labor can be used for skilled jobs?

● Yet that is exactly what you are doing when you sit him down at a "split-second" production machine and then slow up the method by which materials are delivered to, and taken from, his machine. Neither he nor the machine can produce to the fullest extent . . . and as a result of the "slow-up" on "down time" you pay more for per hour of labor and more per unit produced.

● If you want better production records, then give your workers the means to produce—and that means not only *at* the machines, but *between* machines . . . loading and unloading . . . in your storage areas.

● Today, in the face of keen competition, you need the savings available to you through modern materials handling equipment and methods. \$2.00 is too much to spend to accomplish a 20c job! That is why it will pay you, as an executive, to "get into" the problem with your department heads at the first opportunity.

● After all, slave labor is the only kind of labor that a manufacturer can afford to use to move materials—and slave labor has no place in the American way of doing business!



Fifth of a series of messages to those responsible for American Industry by

*Flow*

Magazine.

INDUSTRY'S LEADING MAGAZINE OF MATERIAL  
HANDLING AND PACKAGING METHODS

Cleveland 13, Ohio

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